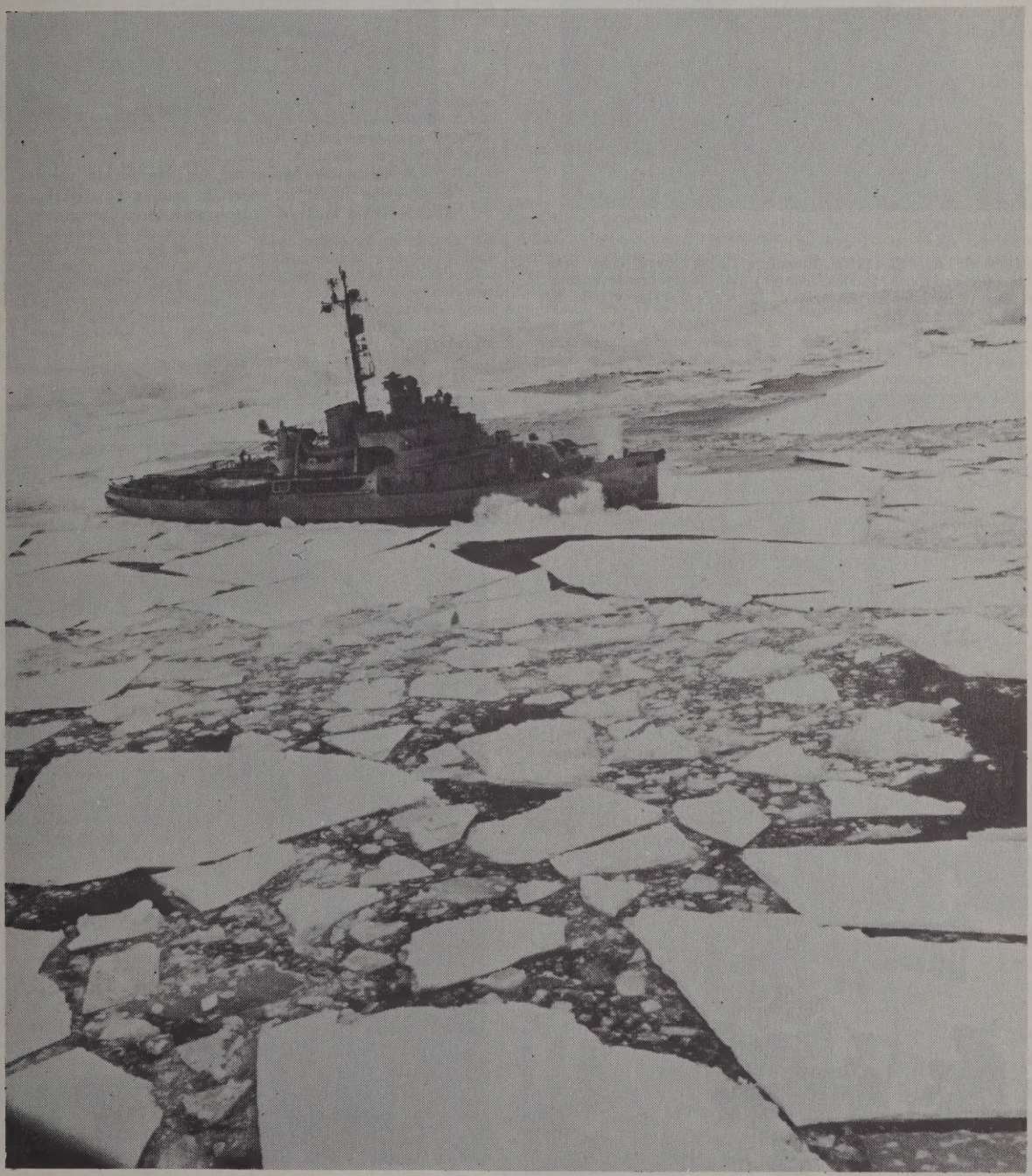
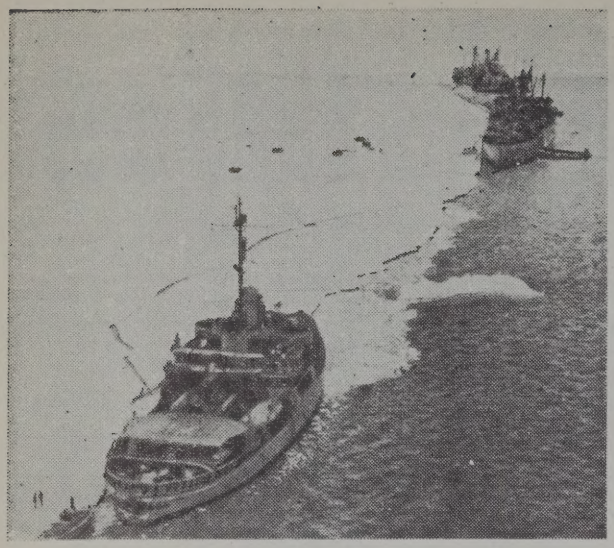
THE POLAR TIMES

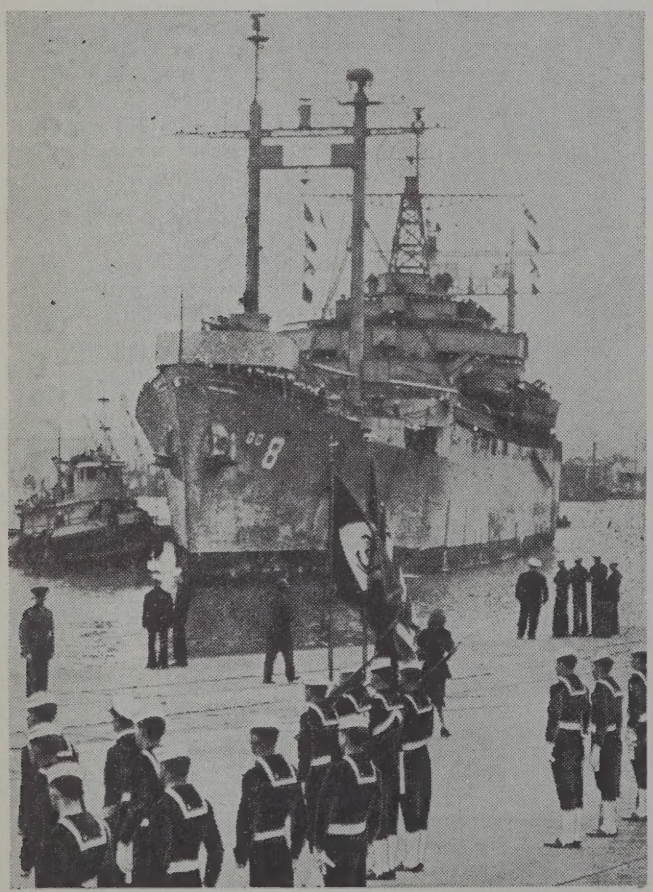


The icebreaker Northwind slams into a floe in the Bay of Whales to clear a mooring site for ships of the Navy's antarctic expedition.

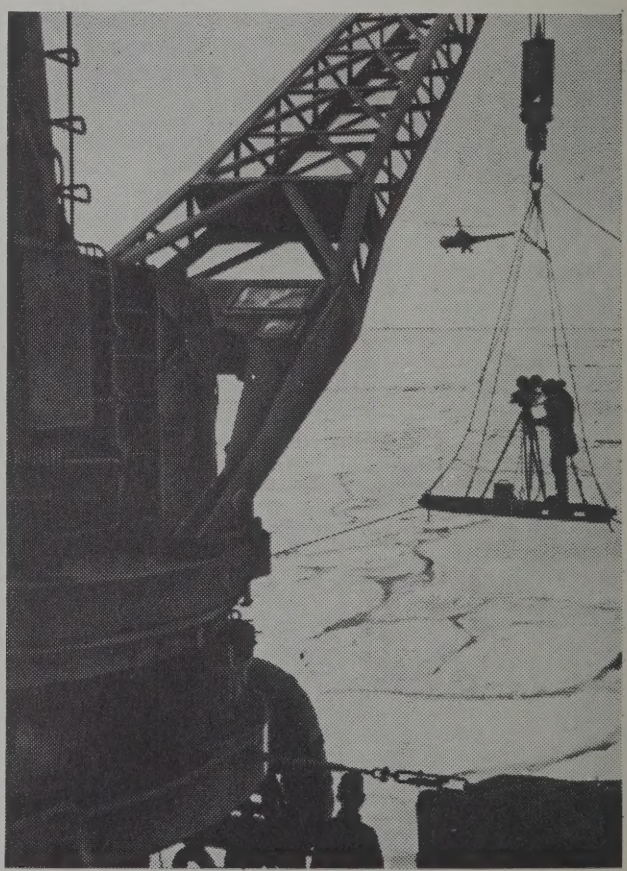


SHIPS OF EXPEDITION, including Coast Guard icebreaker Northwind (foreground), Merrick (center) and Yancy (rear) anchor to ice in Bay of Whales in Antarctic. Ross ice barrier visible in background is 900 feet thick.

A helicopter based on the Northwind returns from an observation flight in which it sought new paths in the ice. Rear Admiral Richard Cruzen, task force commander, is aboard.



Navy color guard stands at attention as tug eases in the Mount Olympus, flagship of Navy's Antarctic expedition. Aboard the ship when it docked at Navy gun factory in Washington, were Rear Admiral Richard Byrd, expedition chief, and Task Force Commander Richard Cruzen.



PRECARIOUS PERCH—Working from a dangling platform alongside the ice-breaker Burton Island, photographer's mate T. H. Malone makes motion pictures of the Navy Expedition's slow progress through heavy ice packs.

The Polar Times

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ANTARCTIC TASK FORCE GAINS MILITARY DATA

By WALTER SULLIVAN

ON BOARD U. S. NAVY ICEBREAKER BURTON ISLAND, March 1—After two months of exploration, war-trained Navy pilots have filled in almost all of the Antarctic continent's coastline and have gone a long way toward putting an end to the exhilarating experience of sighting great areas heretofore unknown to man.

Never before has so large an unknown area been explored in a comparable time, but, of more immediate importance, the Navy has incalculably increased its knowledge of operations in the polar regions.

Two months ago thousands of miles of the Antarctic's coast never had been seen or else had been charted entirely wrong. The expedition has narrowed the world's unmapped coasts to one—the southern shore of the Weddell Sea. Poor weather made photographic coverage of the shoreline uneven with small gaps, which the West Group, retracing its steps, is now trying to fill in.

The U. S. S. Currituck's planes worked west from Victoria Land to the central coast of Queen Maud Land while planes from the U. S. S. Pine Island worked from Marie Byrd Land to Palmer Peninsula and are now waiting in Weddell Sea for the slim chance that the weather will allow them to fill in the missing link of Antarctic coast line.

The expedition's discoveries—of mountain ranges higher than the Alps, of vast bays and a snow-free region with unfrozen lakes—excite the imagination, but far more significant from the Navy's point of view are the experience and technical knowledge gained.

This has been the Navy's first full-scale task force exercise in polar weather and it need hardly be pointed out that what applies to the Antarctic region generally applies to the Arctic, where, if such an operation were performed, it might have had embarrassing diplomatic implications.

A task group consisting of an icebreaker, submarine and three ships with thin hulls that are standard for seagoing cargo carriers have penetrated a 600-mile belt of pack ice and returned without suffering greater damage than such ships might have endured in a severe storm.

Rear Admiral Richard H. Cruzen, operational commander of the expedition, believes that such single-screw ships could operate successfully in these waters with a little more hull protection. The submarine with a pressure-resistant hull at first did better than cargo ships. But later mushy ice pushed right over the sub's rounded hull, making her so difficult to handle that she had to be towed north out of the pack.

What appeared to please Admiral Byrd most was the success in producing a hard surface atop a polar ice cap on which even heavy Douglas transports could taxi with wheeled landing gear. Army Air Forces observers followed this experiment closely.

The six transports which flew off the carrier north of the pack with special ski-wheel landing gear made exploratory flights with skis only, wheels having been removed.

The Marine Corps' most valuable landing vehicle, the tank-like LVT, proved ideal for polar transport. Two covered 245 miles in a single trip. The occupants slept on cots inside the vehicles.

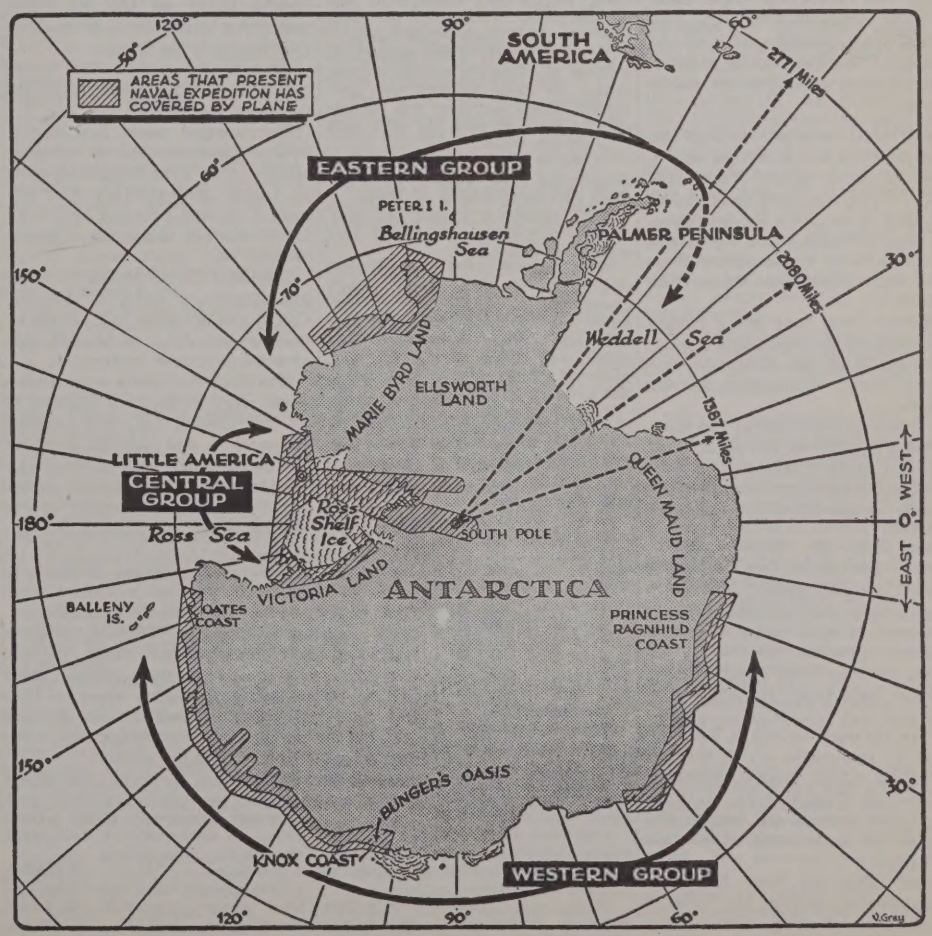
Little Americans learned how to unload onto an ice beachhead, and build and live in a tent camp. Since it was summer temperature here, never lower than 23 below zero, operations in Alaska this winter are considered more effective for cold weather tests.

The Navy has played down the question of territorial claims in the Antarctic and reiterated that the United States officially has made no claims and does not recognize those of anyone else.

Aerial mapping and operational exercises were the chief objectives of the task force and scientific projects had to be fit in as best they could. Some of the latter were completely nonmilitary, such as the work of two fish and wildlife survey men who collected various specimens and took a census of whales in the sanctuary north of Ellsworth Land.

Other observations had military applications, such as a study of the speed and peculiarities of sound transmission through ice and frigid water for improvement of submarine echo-ranging. Five men were engaged in studying earth magnetism in its various forms as applicable not only to correction of the magnetic compass but also as applied to radio interference, the use of magnetic ordnance in high latitudes, and mapping from the air with a magnetometer to indicate the basic geology of land under the icecap. It is hoped other data will widen the knowledge of weather and the ocean floor in the southern hemisphere.

NEW LIGHT SHED ON THE LAST DARK CONTINENT



The American claim in the Antarctic roughly covers the territory from Palmer Land west to the Ross Sea.

ANTARCTIC RESCUE OF SIX NAVY FLIERS CARRIED OUT BY AIR

MEMORIAL TO THREE DEAD

Their Names on Shattered Wing of Craft That Hit Snow Peak on Ellsworth Land Shelf

By WALTER SULLIVAN

ABOARD MOUNT OLYMPUS, in the Ross Sea Ice Pack, Jan. 11—Twelve days after they disappeared into foul weather over Antarctica six members of the crew of the Navy expedition's missing plane were sighted shortly after noon today, New York time.

Three of the nine men who took off in the Martin Mariner patrol bomber from the seaplane tender Pine Island early Dec. 30 were dead.

The six survivors were seen standing beside their wrecked and burned craft waving madly as the Mariner flyingboat, sister ship of their downed plane, circled above them.

ABOARD MOUNT OLYMPUS, Jan. 12—The six survivors of the Dec. 30 crash of the Navy Antarctic expedition plane were picked up early today from the ice fringe of the Ellsworth Land Coast and flown to warm bunks aboard their base ship, the seaplane tender Pine Island.

Behind them they left a unique memorial to the first three Americans to die on the Antarctic continent—their companions on the flight.

On one of the wings of the shattered and charred wreck of their plane, in large letters painted with colored emergency marker, are the words, "Lopez, Hendersin, Williams —Dead."

One of the six was seriously injured. The other five, suffering minor injuries, hauled him on a sledge eight miles across the snowy ice shelf to open water on which another Martin Mariner plane from the Pine Island alighted yesterday afternoon to make the rescue.

The six were ferried in a rubber boat to this plane, which was piloted by Lieut. Comdr. John D. Howell of West Orange, N. J. It then flew them to the tender, stationed 300 miles away outside the ice pack.

The survivors lived for more than twelve days in the forward part of the fuselage, using parachutes for extra tentage. Their emergency supplies gave them plenty of food.

After the survivors had completed their eight-mile hike across the ice plateau from the wreck scene to the edge of the shelf yesterday and the rescue plane was on the water near by, a sudden fog isolated both survivors and rescuers.

Lieutenant Commander Howell's big flying boat groped around the open water. Its crew had to keep it moving to avoid drifting ice floes, which they spotted by the plane's radar. Visibility at times was less than twenty-five yards.

The fog finally lifted enough at 8:35 A. M., Eastern standard time, today, to take aboard the survivors. These six men had to negotiate a thirty-foot ice cliff that fronted the water.

At 12:29 P. M., EST, they were aboard the Pine Island with a hot meal and sleep ahead of them.

Capt. George F. Dufek, the commander of the Eastern group, sent a detailed account.

When the ill-fated plane's crew had made its last flight report about 7:25 A. M. on Dec. 30, visibility was less than two miles with a ceiling of about 1,000 feet. The plane was flying due south with Lieut. (j.g.) William H. Kearns Jr., the co-pilot, at the controls.

The fliers sighted Cape Dart at the tip of Thurston Peninsula a few minutes after their last report. They changed course slightly to the left toward the cape and climbed to 1,000 feet.

Then Lieutenant Kearns saw land head ahead and swung the Mariner around to an easterly course. He could see no horizon so kept on swinging to the left back toward the Pine Island.

One of the dangers of polar flying is a "whiteout," when sky, ground and horizon all one indistinguishable sphere of white. This, plus the overcast, probably was responsible for the crash.

While still in the turn, the plane jarred slightly; it had grazed a peak of snow-ice. Lieutenant Kearns gave her the gun and tried to pull up into the sky. Then the plane exploded.

The crew believed that possibly static electricity from friction on the hull had ignited gasoline, in the plane's belly.

Wings and engines flew off. The fuselage broke apart and debris was scattered over the ice plateau.

A Mariner seaplane is stowed (circle) on fantail of the tender Pine Island.

Ordeal of Antarctic Crash Bared in Survivors' Story

By WALTER SULLIVAN

ABOARD MOUNT OLYMPUS, Jan. 13—The story of how six men of the Navy's Antarctic expedition—stranded on the ice plateau of the Ellsworth Land coast after their plane exploded—kept alive for twelve days of frigid wind and blizzard, unfolded today as the six recuperated aboard their base ship, the tender Pine Island.

Five of the plane's nine occupants were thrown out amid the debris of the aircraft,

Two, caught inside part of the broken fuselage, had been killed instantly. They were Ensign Maxwell A. Lopez, the navigator, of Newport, R. I., and Aviation Radioman 1/c Wendell K. Hendersin of Portsmouth, Va.

Another, Owen McCarty, chief photographer's mate, of Sonoma, Calif., was stunned, but recovered quickly and dragged himself free of a burning rear section.

The pilot and plane commander, Lieut. (jg) Ralph Paul LeBlanc of St. Martinville, La., was knocked unconscious and slumped strapped in the co-pilot's seat in the flaming cockpit. The co-pilot, Lieut. (jg) William H. Kearns Jr. of Boston, Mass., had been at the controls.

Lieutenant Kearns, William C. H. Warr, aviation machinist mate second class, of Portsmouth, Va., and James H. Robbins, aviation radioman second class, of San Diego, Calif., were among those who were thrown clear. They fought their way into the forward portion of the wreckage and pulled out Lieutenant LeBlanc.

Lieutenant LeBlanc, the single one of the survivors who was seriously injured—chiefly from burns—is under medical treatment aboard the Pine Island.

Frederick Warren Williams, aviation mate first class, who had been thrown clear but was found unconscious, died in the second hour after the crash. His body and those of Ensign Lopez and Radioman Hendersin were buried, on the seventh day, in the snow-ice under one of the sheared-off wings. Their names were painted on the wing and the United States flag was planted near by.

The ninth man aboard the plane, who had also been thrown clear, was Capt. Henry Howard Caldwell of Norfolk, Va., the skipper of the Pine Island, who had gone along as an observer.

Soon after the crash, Radioman Robbins with Captain Caldwell's help set up an emergency transmitting set, but its kite antenna was snatched away by the gale. Later, Robbins, Warr and McCarty made continual attempts to send out calls for help with cranked radio sets; their messages were never heard.

After their first efforts followings the crash, the six survivors, all suffering more or less from shock, crawled into a narrow tunnel compartment in the tail setcion. There they lay for thirty-four hours before they roused themselves.

Caldwell's Leadership Marked

ABOARD MOUNT OLYMPUS, Jan. 13 (AP)—Calm self-discipline and the leadership of Capt. Henry H. Caldwell were credited today with saving the lives of the six Navy men who were brought back by air yesterday to the Eastern group's seaplane tender Pine Island.

After the shock wore off, Captain Caldwell took charge. He established a policy of two meals a day from the emergency rations. Gasoline from an unbroken tank provided enough fire to heat some food. New Year's dinner consisted of a cup of hot chicken soup and a slice of bread smeared with peanut butter for each man.

They did not find the medical supplies until the seventh day, when they located some sulfadia-

zine tablets and sulfa crystals in the wreckage. They gave Lieutenant LeBlanc tablets daily, while McCarty and Warr used the crystals for lacerations. The men reported they suffered very little loss of blood.

The fact the survivors remained at the scene of the crash, as instructed, was reported a major factor in their eventual rescue. The search was concentrated upon the known course their plane was to have covered in its photographic and mapping mission.

The men laid metallic radar reflectors on the snow in the hope of attracting searches, but it was finally fire that did attract the attention of the discovery plane from the Pine Island last Saturday noon.

The only signs of life they noted during their stay on the Ellsworth Land shelf were five unidentified birds and, later, some Adelie penguins near the water where the rescue plane awaited them.

Diaries Add to Story

ABOARD PINE ISLAND, Off the Antarctic Coast, Jan. 13—Diaries of the days passed on the ice were kept by Captain Caldwell and by Photo Mate Owen McCarty.

After the shock of the crash, which left all dazed from 36 to 48 hours, they began to take stock of their situation. Much of their time at first was passed sleeping or just sitting. Aviation Radioman James Robbins was the first to become active and later was helped by Aviation Machinist's Mate Warr, who recovered next. Robbins began to rummage around the wreckage for food.

The plane had disintegrated to such an extent that most of the food supply had fortunately been thrown clear of the plane before it burst into flames. By about 2 P. M., EST, on Dec. 31 Robbins had found cans of apricots which he served to all hands.

On New Year's Eve he served each man a cup of hot spinach soup, which was their first hot meal. After eating all seemed to feel better and their spirits began to rise. However, Lieutenant Kearns, Lieutenant LeBlanc and McCarty were not able to get up.

For three days, partly because of bad weather and partly because of shock, they stayed in the tunnel where all except Kearns and LeBlanc, who had sleeping bags, shivered with the cold. Gradually sleeping bags were retrieved for the others.

As the days went by the necessary work provided any who could get about with all the exercise they desired. Soon it became necessary to provide some form of diversion for the long hours of wakeful waiting.

This was not easy. There were no books, no radio, no cards, no games. Pastimes had to be invented. Checkers were made out of candy charms for white men and malt discs for black men. When this proved to be onesided, Captain Caldwell and Warr taught the others how to play salvo and many hours were whiled away in an enjoyable manner.

Most of the men confessed that deep down in their hearts they considered their situation quite hopeless, but that Captain Caldwell held up their spirits.

The search for food became a hobby, although at first the men could not spend more than a half hour at a time outside their cramped shelter in the after section of the plane. Items of food were still found up to the day before they were sighted.

It was decided that their meals would be two a day, breakfast at 8 o'clock and dinner at 6 o'clock, after which all would turn in.

They improved their situation further by setting up two tents near the plane, one for Captain Caldwell and McCarty and the other for Robbins and Warr. Kearns remained in the plane, and in spite of a broken arm and other injuries looked after the badly burned LeBlanc.

All realized that there was no hope for rescue as long as the weather continued bad. The first Thursday, Friday and Saturday were beautiful days in weather over the area where the plane crashed, and their prayers were that it would move out to sea where the Pine Island was waiting beyond the ice floes.

Captain Caldwell seemed never to sleep, but always had an ear cocked listening for the first sound of a plane. Yet when the rescue plane did fly almost over them, all were inside. They rushed out, only to find it disappearing fast with no sign of recognition.

They were reassured by Captain Caldwell that the plane would be back; and during the hours they made ready a smoke signal, using a rubber raft which they saturated with gasoline and lighted when the plane returned. They watched while they waved anything they could find.

Almost immediately they saw the plane turn and head straight for them. In their joy they danced and cheered.

They had not known the presence of clear water eight miles north of them. When the search plane asked them if they could make the trek north, they held a conference and answered yes by forming a circle and joining hands although Kearns had only been able to leave his shelter the day before.

LeBlanc was placed on the sled, along with considerable stores and equipment, for they wanted to insure against mishap along the journey over unknown terrain.

Dragging the heavy sled and

Navy Men on Helicopter Saved in Antarctic Crash

Captain Dufek Aboard When It Drops Into Sea

LITTLE AMERICA, Jan. 19 (Delayed) (AP).—Captain George Dufek, commander of the Eastern task group of the United States Navy's Antarctic expedition, and his pilot were rescued uninjured today from the icy waters after their helicopter crashed into the sea. The plane was lost. Rear Admiral Richard H. Cruzen gave no details of the rescue other than to say that the pilot, whom he did not further identify, and Dufek escaped injury. Both men wore life preservers.

Cruzen said the plane, its rotor blades coated with ice, dropped into the sea while attempting to land on the platform of the seaplane tender Pine Island. The plane was not equipped with floats.

Navy Revises Map of Antarctica; Fliers Find Lofty Peaks, Vast Sea

ABOARD MOUNT OLYMPUS, at Little America, Jan. 24 (Delayed) (AP)—The crews of the two planes from the Navy Antarctic expedition's Eastern Group that flew over uncharted territory Thursday, reported sighting two new high mountain ranges and seeing dirt at the coastline, which is a rarity in the Antarctic.

The planes flew inland east of Mount Ruth Siple, which is near the coast at the western extremity of the Franklin D. Roosevelt Sea, said a report received by Rear Admiral Richard H. Cruzen, task force commander, late today.

Pilots on the Eastern Group's flight said the planes flew over 250 miles of the Roosevelt Sea coastline and one plane penetrated 150 miles inland over territory never seen before and not yet named. One of the crews reported sighting a dark strip of dirt at the coastline with open water beyond it. Such dirt could be a moraine left by a melted glacier.

The airmen reported seeing an open water lead off this unknown coast, which lies northwest of Lincoln Ellsworth's line of flight on an earlier exploration. They said it looked from the air as though an icebreaker could get through to this new coastline.

The plane flying into the interior sighted a group of mountains rising to about 15,000 feet above sea level, southwest of the mountain named for the wife of the Antarctic veteran, Dr. Paul Siple. The estimated height would make the range higher than any in the United States.

Visible to the southward was another mountain range, but no details will be available until photographs are developed.

By WALTER SULLIVAN

LITTLE AMERICA, Jan. 27—In a spurt of exploration, seaplanes of the Navy Antarctic expedition filled in yesterday thousands of square miles previously blank on the maps of the South Polar continent.

Five long-range flights were made during twenty-four hours over coasts uncharted before the present operation. Both the East and the West Groups—scouting regions 1,000 miles distant on either side of the Ross Sea—enlarged their coverage of areas first glimpsed by the Navy fliers in spells of good weather last week.

The East Group's two Mariner planes are flying from the tender Pine Island in the Franklin D. Roosevelt Sea off the western sector of Ellsworth Land.

Yesterday they discovered a new range of mountains 2,500 to 6,000 feet high and the fliers counted at least thirty-five peaks. This range is south of the Walter Kohler Range and trends north and south. Presumably the discovery was to the east of the two new higher ranges seen by the fliers last Thursday.

The airmen also saw five previously unknown islands locked in bay ice off the eastern coast of the Roosevelt Sea.

LITTLE AMERICA, Feb. 5—Flights from the seaplane tender Pine Island, when pieced together with the explorations of Admiral Byrd and Mr. Ellsworth, indicate that this entire quadrant of the Antarctic is mountainous, with an irregular, deeply indented coast line. If the United States decides to claim any part of the Antarctic this is the most likely sector.

Plane crews from the Pine Island saw many snow-free peaks among the mountains on the newly discovered peninsula. They are only 3,000 feet high, but they lead in the south toward a range rivaling any yet sighted in the Antarctic.

To the west of this unnamed peninsula lies a bay that would fill most of Long Island Sound. It is inland from the head of this bay that the loftier range thrusts skyward. The greatest peak, 15,000 feet high, taller than any in the continental United States, has been temporarily labeled Mount X-Ray.

Mount Ruth Siple, also 15,000

hampered with rough going through three-foot drifts and crevasses two to three feet wide, they pressed northward. Many times they were forced to turn back by impassible breaks and cliffs before they found a way down to the lower ice shelf.

Now, with their goal almost in sight, a heavy fog set in and their hopes fell again of ever being able to find the path laid out by the plane with marker flags.

It was at this point they were spotted by Lieut. Comdr. John D. Howell and Pharmacist Mate Conger (of the rescue plane crew), who had left their plane by a raft, landed on the shelf ice and were advancing toward the party.

By now the fog was so thick they would likely have been unable to go any further had it not been for the tracks left by the sled that Howell and Conger had pulled behind them.

As soon as the fog lifted enough they stepped off the ice into the raft and soon were on the rescue plane. Back on the Pine Island, all praised the leadership of Captain Caldwell and the courage of their fellow-survivors.

Lieutenant Kearns, for instance, had, in spite of a broken arm and bruised shoulder and side, rushed back into the fragment of the wrecked plane to release LeBlanc's safety belt, thus making his rescue possible.

Crash Survivors Start Home

LITTLE AMERICA, Jan. 20 (U.P.)—Five of the six survivors of the Eastern Group's Dec. 30 plane disaster were en route to the United States today after transfer yesterday from the Pine Island to the destroyer Brownson.

The five survivors of the crash December 30 of the eastern task group's flying boat were transferred to the Philippine Sea by breeches buoy from the destroyer Brownson Jan. 26

Dufek Is Rescued Again From Antarctic Waters

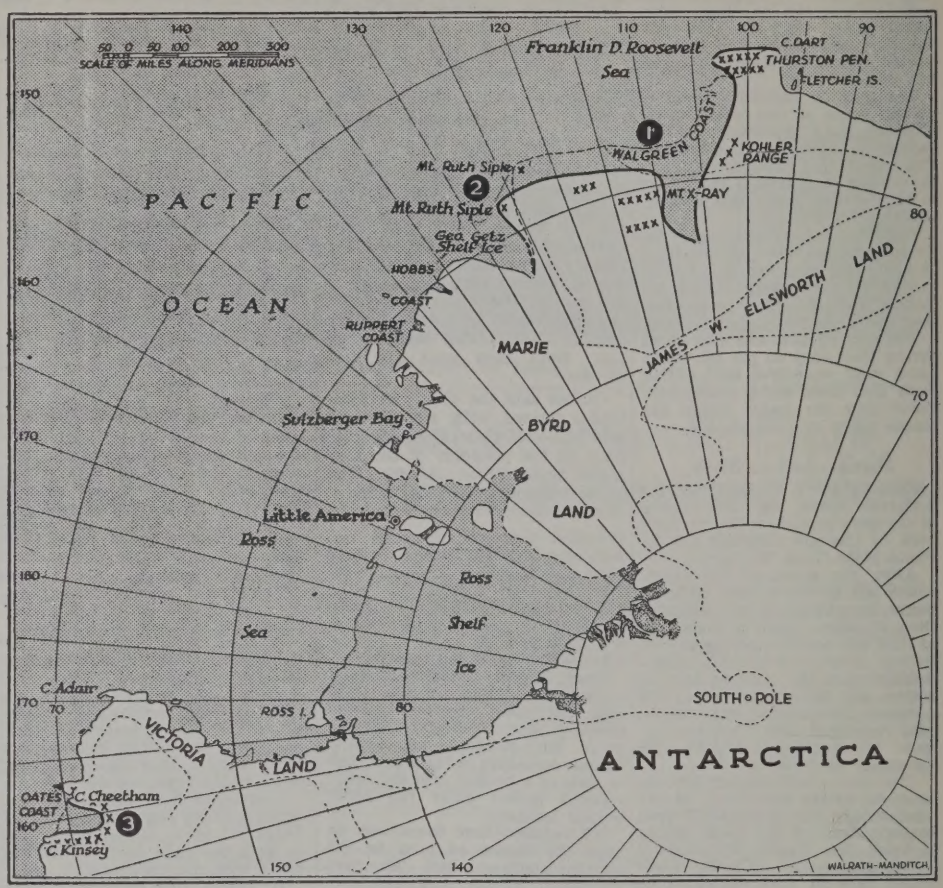
For the Combined United States Press.

ABOARD MOUNT OLYMPUS, Feb. 15—Capt. George Dufek today took his second "swim" in as many weeks in the frigid Antarctic waters.

Captain Dufek, commander of the Eastern group of the Navy Antarctic expedition, was transferring his command from the seaplane tender Pine Island to the destroyer Brownson when a heavy roll in the rough seas snapped the line of his breeches buoy.

Captain Dufek plunged into the icy waters. He managed to extricate himself from the breeches-buoy and inflated his life-jacket. The destroyer crew lowered a whaleboat and had him aboard in eight minutes.

NAVY EXPEDITION REDRAWS PARTS OF MAP OF ANTARCTICA



The most drastic of the alterations made necessary in charts of the polar continent by recent air surveys is in the region southeast of Thurston Peninsula (1). Here, as in other parts of the map, the new delineation of the coast line is shown by the heavy solid line. A great bay was discovered in this region, the Kohler Mountains were relocated (the crosses indicate mountains) and west of the bay a previously unknown range, with "Mount X-Ray" as its tallest peak, was found. Farther west the position of Mount Ruth Siple (2) was put seventy miles southwest of the point at which it had hitherto been shown. Still farther to the west a bay fifty miles wide and 100 deep and ringed by mountains was discovered on the Oates Coast (3).

feet high, was found seventy miles southwest of its charted position, in an area shown on the old maps as a floating shelf of ice. Mount Siple, seen only at an extreme distance before, towers alone above a great white plain. George Getz Shelf Ice, charted for this area, now is believed to be non-existent.

On one of two small islands north of Mount Siple, 5,000-foot mountains with naked crags have been seen. All along the coast east of Mount Siple brownish land breaks through the cliffs of the continental ice cap, which average about 120 feet high.

The crews of Martin Mariners also report much open water close to the shore line. Rear Admiral Richard H. Cruzen, veteran ice pilot and operational head of the expedition, believes this ice-free water extends virtually along the whole coast from Sulzberger Bay to Palmer Peninsula. The feat of reaching it through the tight belt of pack ice still is a challenge to explorers.

By Thomas R. Henry

WITH NAVY ANTARCTIC EXPEDITION, Feb. 9 (Delayed).—A region of ice volcanoes was surveyed by exploring planes today. These strange formations of shelf ice west of Palmer Peninsula are gigantic bowls of ice with floors a mile in diameter. They are surrounded by ice walls 100 feet high. From above they look like miniatures of craters on the moon's surface.

In the bottoms of the bowls are mounds of ice blocks 30 to 40 feet high. The common explanation is that some sort of gas becomes entrapped in the middle of the shelf ice, resulting finally in an explosion with the formation of craters. Later explosions pile up blocks inside.

Planes of the expedition's eastern group flew over the ice volcano region exploring islands and the coastline west of Marguerite Bay, site of the east base of the last Byrd expedition. They made an extensive air survey of two of the largest islands in the Antarctic.

These historic grounds were supposedly first sighted by the New Bedford whaler Nathaniel Palter in 1820. The biggest island, Alexander I, was sighted by the Russian Admiral Bellinghausen about 1820 but is inaccessible and has been practically unknown ever since. It covers about 8,000 square miles, lined on the north and west by ice cliffs 100 feet high. Above these towers is a great plateau broken by three mountain ranges reaching altitudes of 7,000 feet.

The planes also photographed pear-shaped Charcot Island, found by a French explorer 35 years ago in one of the earliest attempts to reach the South Pole. It is covered by a low ice cap from which protrude black jagged mountain peaks. The western Marguerite Bay region flown over today remains a little known part of the Antarctic where the last Byrd expedition found the nearest approach to the "Antarctic Shangri-La—a green valley in an ice-walled canyon.

The valley is about a quarter of a mile wide. The canyon walls concentrate the sun's heat and provide wind shelter. Snow melts quickly and a constant trickle in summer keeps moss bed moist. This may show up in study of photographs in Washington.

This is regarded as important as a possible surviving link of ancient land bridge between Antarctica and South America. Here still grew a small flowering plant and grass.

ABOARD MOUNT OLYMPUS, March 3 (Delayed)—After almost two weeks of frustration the eastern wing of the Navy's Antarctic expedition abandoned yesterday its attempt to reach the southern coast of the Weddell Sea. The ice and fog of the Weddell Sea have kept the probing eyes of explorers from solving the riddle of its southern coast ever since the man for whom the sea is named first penetrated the area 124 years ago.

Capt. George J. Dufek, commanding the eastern group, took no chances. Even at that when he turned homeward yesterday the bays in the ice pack were freezing over and he was fearful that an unseen arm of the pack might close the route of escape to the north.

Since the group sailed around the tip of Palmer Peninsula on Feb. 17 it has been unable to launch a single successful flight although it came within about thirty miles of the Princess Martha Coast at the eastern end of the Weddell Sea.

Three times, a pair of Martin Mariner seaplanes were laboriously lowered into the water. Twice they had to be hoisted again without even taking off. On the third occasion they were turned back when a short distance out by thick weather.

This group's achievements were all on the other side of Palmer Peninsula, filling in unknown portions of the coast between there and the Ross Sea. It put in 150 hours of flying time with Martin Mariners which took 15,000 aerial photographs and 38,500 feet of movie film.

Perhaps the high point of the time for the men who had to stay on the ship far from the thrills of discovery was the sudden encounter with a group of Russian whalers in the Weddell Sea.

3 Expedition Ships Reach Brazil

RIO DE JANEIRO, March 18 (AP)—Three ships of the United States Navy's Antarctic expedition arrived today en route back to the United States. The vessels, the aviation tender Pine Island, the submarine chaser Brownson and the tanker Canisteo, were expected to remain here until Monday.

ANTARCTIC FLIERS SCOUT NEW REGION

ABOARD MOUNT OLYMPUS, in the Icepack off the Ross Sea, Jan. 5—A seaplane of the Western Group of the Navy's Antarctic expedition has made an exploratory flight—the first success for the group in five attempts—far over Wilkes Land, 1,000 miles west of here.

The plane flew over islands and mountains and glaciers on the mainland in a region south of Australia never before seen by man. It photographed the area with special cameras.

The Wilkes Land coast in the area scouted was found to differ greatly from the estimates of current charts, said the report today from the western group's seaplane tender, the Currituck.

The plane flew at altitudes up to 13,000 feet which is close to the Martin Mariner's maximum with a load of emergency gear and gasoline. The flight crew reported the terrain very rugged.

MOUNT OLYMPUS, Jan. 7. More than 250 miles of coastline of Wilkes Land, near where the Antarctic Continent was first sighted by American Capt. Charles Wilkes in 1840, were photographed by planes from the eastern group of the expedition. This is one of the most debatable areas on earth. Existence of this land was long disputed. It was held that Capt. Wilkes had seen a mirage and the region was not visited again until Sir Douglas Mawson's expedition in 1912. These are the only explorations in this part of Antarctica.

The region photographed today includes a large part of the King George V coast, barely marked on the latest maps. All the land beyond is completely unknown. This coast lies roughly along the Antarctic Circle—a line of 100-foot high ice cliffs which rise to the level of the plateau of the continent with patches of bare rock visible in isolated places.

The coast is fronted by glacier tongues and an ice shelf which have prevented survey by ships. Detailed air photography is considered of special importance to settle finally the bitter Wilkes controversy over credit for discovering the continent.

Black peaks of a hitherto unknown mountain range averaging 8,000 feet above sea level were discovered yesterday by an exploration plane from this expedition.

Taking off from the seaplane tender Currituck, which is cruising in open water outside the 100-foot ice shelf which bars the way of ships to the Titus Oates coast of King George V Land, the plane flew across a rock-inclosed bay to find itself over a plateau more than a mile above sea level.

This was practically a level plain, entirely covered by ice. Southward the elevation increased sharply until the high peaks were seen protruding from the ice. They towered more than 2,000 feet above the plateau, making them at least 8,000 feet above sea level. Hills have been reported hitherto as seen from the sea in the general area of Rennick Bay, but the area of more than 1,000 square miles seen today has been a complete blank space on all maps.

50,000 Square Miles Mapped By Navy Planes in Antarctic

By Thomas R. Henry

BAY OF WHALES, Antarctica, Jan. 22.—More than 50,000 square miles of hitherto completely unknown interior of Wilkes Land was photographed from the air today by two planes flying parallel courses 60 miles apart and approximately 300 miles inland.

These flights crossed Adelie Coast along the 140th meridian east longitude about 200 miles west of the supposed location of the South Magnetic Pole. The flight has been delayed nearly two weeks by bad weather, with rolling seas and heavy mist shrouding the land.

The flight had intended to trace the coastline, which has been in dispute since 1840, when discovered independently twice in the same day by American Admiral Charles Wilkes and French Capt. Durville. The coast was crossed today on part of the French discovery about 300 miles west of the Wilkes landfall.

Heavy ice bordering the coast makes impossible an approach by ship and no effort has been made in a century to survey the interior. All that is known to date is that high snow-covered hills stretch indefinitely southward.

The flight was made today in excellent weather for automatic photography by six cameras in each plane taking pictures simultaneously.

The entire section is marked on most maps as Wilkes Land, most mysterious part of the Antarctica.

Flight commanders of the photographic missions were Lieut. Comm. W. J. Rodgers of Lakeworth, Fla., and Tacoma, Wash., and Lieut. Comm. D. E. Bunger of Coronado, Calif.

Apparently the average elevation of this great mass of icebound land is nearly that of the peaks of the Rocky Mountains. The million square miles of the unknown interior of Wilkes Land can be pictured as a rolling plateau some 9,500 feet above sea level and rising gently to 2 miles high at the South Pole.

This is the deduction drawn from the first flights beyond the high barrier of ice cliffs which form the shoreland of the continent.

The land over which the planes flew was swathed in a low white mist which hid most of the surface features, but minute-to-minute observations were taken with an electronic eye, new type altimeter which detects accurately differences of 10 feet or less in elevation of surface below by means of echoed radio waves.

These observations showed no mountains within 150 miles of the sea. This may be interpreted as indicating fairly level terrain from the sea to the South Pole.

The two planes making the survey flew about 1,500 feet above the surface. Even at this altitude they encountered a constant temperature of 18 below zero, although surface temperature could have been only little below freezing in the Antarctic midsummer.

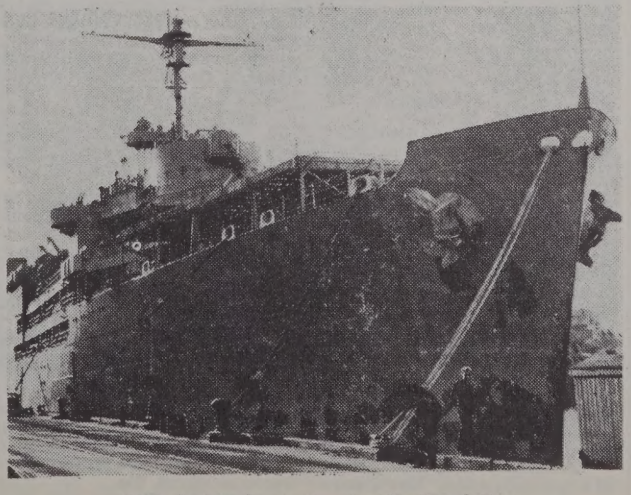
Previous deductions that the continent is more than a mile high were based on elevations near the coast, a flight to the South Pole and a few flights into the interior in other sections. The latest flights of this expedition over Wilkes Land provide strong confirmation and indicate perhaps an even greater altitude.

There now appears to be little reason to expect large depressed areas which would reduce the average elevation.

The flights into Wilkes Land were over the Adelie Coast roughly around the 140th meridian of east longitude and passed about 200 miles west of the location of the South Magnetic Pole as calculated six years ago.

While the observations are not considered highly reliable, they indicate that, contrary to expectations, the center of the South Magnetic Pole has remained fairly constant while the area or the North Magnetic Pole has shifted.

However, this is difficult to determine because of local magnetic influences and the fact that now it is generally recognized the "Pole" probably covers an area of about 1,000 square miles.



USS Currituck at the Norfolk Naval Base

Polar Planes Brave 'Windiest Region' to Chart Unknown Area

By Thomas R. Henry

WITH NAVY ANTARCTIC EXPEDITION, Jan. 27.—Planes of this expedition's western group today are flying over the windiest region in the world on their way to map an unknown strip of coast between the 140th and 130th east meridians.

This region is a bay about 27 miles wide and 12 miles deep, where an almost constant blizzard blows northward from the South Pole with winds averaging 60 miles an hour. Such hurricane winds are met nearly every day in the year.

Here is a region of "flying seas," one of the strangest phenomena of Antartica. These winds raise great whirlpools of snow on the continental plateau. The snow is raised to altitudes of as much as a thousand feet and blown northward at from 50 to 90 miles an hour.

Snowstorm in Sky.

On the surface, it is calm. No snow falls. There is only the tumultuous snowstorm in the sky, which accentuates the strange white darkness of a cloudy day. Over the ocean, this snow is precipitated as snow or rain.

Estimates of Douglas Mawson, based on gauge measurements near the surface, were that in a year these swift-moving snow masses which do not touch the earth represent an area of water over this whole bay region about 1¼ miles deep. That much water is added to the oceans and eventually distributed over the world.

In other words an area of water almost the size of Chesapeake Bay takes wings and flies.

The area surveyed today is regarded as important, since it may afford the best approach to the South Pole for a land party.

There is an area of pack ice which extends north from the continent to beyond the Antarctic Circle. This has stopped all ships to date, and the dimensions of the pack have been unchanged for a hundred years.

Beyond lies high land with snow-covered cliffs descending to the sea. Southward from the coast the land appears to slope gently upward to the pole without mountain ranges such as Queen Maude Range which block polar parties at the foot of the Ross ice shelf where the Bay of Whales is located.

Wilkes Land Coast Mapped Far

LITTLE AMERICA, Feb. 6 (Delayed) (AP)—A Mariner plane of the expedition's Western Group has discovered a new bay in an exploratory flight over the Knox Coast area of Wilkes Land, nearly 2,000 miles west of Little America, Admiral Byrd announced today.

The bay, 200 miles wide, east to west, and sixty miles deep, north to south, was mapped during a flight made several days ago from the seaplane tender Currituck.

The Western Group fliers also discovered a peninsula west of Adelie Coast, where earlier maps had shown a bay.

Antarctic 'Oasis' of Green Lakes And Earthlike Mounds Discovered

Combined American Press Dispatch.

ABOARD MOUNT OLYMPUS, in the Antarctic, Feb. 11—The discovery on the frozen South Polar continent of a remarkable inland "oasis" of muddy pea-green lakes dotted with tall, dark brown mounds of apparently bare earth was announced today. The discovery may be one of the most important made by the United States Navy expedition.

A forty-mile-wide "Land of Lakes" region with conical mounds rising 500 feet above the surface in an area completely devoid of ice was located inland in the vicinity of the Knox Coast by fliers of the expedition's Western task group reconnoitering in Mariner planes Monday, Capt. Robert S. Quackenbush Jr., chief of the expeditionary staff, said.

Discovery of the lakes and mounds, which resembled chocolate drops from the air, raised the question as to whether the area might be warm enough to support year-round human settlements comfortably. Expeditionary leaders said they considered the discovery of greatest significance from the standpoints of geology and geography.

Dispatches to this headquarters ship from Capt. Charles A. Bond, commanding the Western wing, said the lakes were "of a pea-green, muddy color, interspersed with dark blue and light green," and that conical-shaped mounds rising 500 feet were dark brown in color.

The reports said there was no smoke seen in the region. The reference to smoke indicated that the mounds resembled volcanic peaks, but no further explanation was given.

The exact location of the area and the number of lakes and mounds sighted were not specified. Captain Bond's dispatches, however, said some of the lakes were big enough for a PBM to land on.

The lake region had a radius of about twenty miles, Captain Bond said, with the width of the area stretching about forty miles. Photographers' planes took colored motion pictures and still shots of the area.

At least one active volcano—Mount Erebus—is known to exist in Antarctica. Mount Erebus is at the western side of the Ross Sea near McMurdo Sound.

The same flights also discovered numerous nunataks, or islands of rocks, standing above the surrounding ice sheet on the Shackleton Shelf of ice of the Queen Mary Coast. They also found a new glacier, but the specific positions of all these discoveries were not announced.

Planes returning to the mother ship noticed much new ice forming on the sea, Captain Quackenbush said. This might be additional evidence that the new "Landof Lakes" region was comparatively warm enough to remain free of ice while freezing was going on elsewhere in the same general area. The existence of warm-water springs might be the explanation for the inland lake area.

By the Associated Press

The following account was written for the combined American press by Seaman, First Class, Ralph W. Brewer of Baton Rouge, La., naval correspondent aboard the seaplane tender, Currituck, with the western task group in Antarctica:

"The Mariner airplane crewmen who found the remarkable inland lakes region on the polar continent declared that the lake waters seemed to change color and that bare land was visible alongside a glacier, back from the coast.

"The flights were made by plane commanded by Lieut. Commanders William J. Rogers of Lake Worth, Fla., and Tacoma, Wash., and David Bunger of Coronado, Calif.

"We saw land, glaciers, and lakes, whose waters seemed to change from one color to another," said Radioman Richard L. Maris of Portland, Ore., who was a member of Commander Rogers' crew. "I will never forget the blue water along the coast and the pea green water of the inland lakes.

"Machinist's mate Harvey McKaskle of Seligman, Ariz., also in Commander Rogers' crew, said the biggest area of bare land sighted was on the edge of the glacier, about 75 miles inland.

"Lieut. Francis J. Gist of Waterville, Iowa, navigator of Commander Bunger's crew, said he saw mountains which were not snow-covered, but seemed to be warmed internally. He said that at the water's edge along the coast ice rose sharply from a glassy, silky sea.

"Commander Bunger said that in places the coast line appears to be as much as 20 miles off the coast line previously charted. Twenty-seven flights have been completed by the Currituck's three PBM crews, operating alternately in two PBMS for a total of 181 hours. Commander Rogers, who is also Captain of the air detachment on the Currituck, and his crew made 10 hops. Commander Bunger and his crew made nine. Lieut. William R. Kreitzer of San Francisco commands the third crew, which so far has made eight flights.

"During Tuesday's flight in Commander Bunger's plane, Photographer's Mate E. N. Garan of Miami, Fla., took almost 3,500 exposures in color film and about 100 black and white still shots of icebergs, glaciers, etc.

"Machinist's Mate Dale Draves of Los Angeles said, "Now I know how Columbus felt."

NAVY FLIERS ALIGHT ON ANTARCTIC LAKE

Warm Water Sample Taken, Birds and Bare Earth Seen Amid High Polar Icecap

By ALTON L. BLAKESLEE
Associated Press Correspondent
For the Combined United States Press

ABOARD MOUNT OLYMPUS, Feb. 13 (Delayed) — Dispatches from the Navy Antarctic expedition's Western group said a Mariner seaplane had landed yesterday in the newly discovered inland lake region in the western reaches of Wilkes Land. The films found the water "definitely warmer" than elsewhere and noted what appeared to be ore-bearing rocks.

A second Mariner, flying much farther westward, discovered outcroppings of dark red rocks, the reports said.

The crewmen of the first plane reported the whole area of lakes and bare earth rimmed with ice, but said they did not find any vegetation, steam or smoke.

Their landing, believed the first by any seaplane in the continental area of Antarctica, was 200 feet above sea level. Other lakes near by were of different levels, said the disptaches, released by Capt. R. S. Quackenbush Jr., chief of staff of the expedition, who is aboard this ship.

The dispatches from the Western group said the plane that had alighted inland brought back to the tender Currituck a sample of lake water which may help solve the mystery of a region of lakes existing in the polar icecap. Captain Quackenbush said the description indicated that the lakes might be formed by warm-water springs.

Apparently no thermometer readings were taken. A few birds were flying around the lake area, which is back of the Knox Coast at about 105 East Longitude.

Plane's Radar Finds Rocks

The second Mariner, flying to the west of the lake region, sighted nunataks—outcroppings of rock—above the icecap and said these were dark red. The outcroppings were found in the vicinity of Mount Gauss on the Wilhelm II coast (at about 90 East Longitude). They first were picked up by radar. Captain Quackenbush said the plane's magnetic compass behaved almost normally in the flight over the red rocks.

The Mariner that landed on the lake was piloted by Lieut. Comdr. David E. Bunger of Coronado, Calif., whose flight crew normally is composed of Lieut. Francis J. Gist of Waterville, Iowa; Ensign Allen J. Reynolds of Grand Rapids, Mich.; Chief Machinist's Mate H. F. Fuller of Dunedin, Fla.; Machinist's Mate Dale Draves of Los Angeles, Radio Operator Julian Countess of Brooklyn, N. Y.; Radioman Kenneth R. Smith of Bellingham, Wash.; Radioman George H. Booth of Sea Girt, N. J., and Photographer's Mate E. N. Garan of Miami, Fla.

Commander Bunger said there was a glacier to the north and west of the lake region. Color photographs were taken. Commander Bunger on a flight about 100 miles south of the lake region found several mountains at a height of several thousand feet above sea level and in one place measured part of the continental icecap at 8,300 feet above sea level.

The red rocks were found by the crew of a Mariner piloted by Lieut. William R. Kreitzer of San Francisco. The crew reported that back of the Wilhelm II coast the continent had an average altitude of more than 6,000 feet.

After the planes returned, the Western Group ships, continued westward to a new location.

Lakes Region Studied

Combined United States Press Dispatch

ABOARD MOUNT OLYMPUS, in the Antarctic, Feb. 16 (Delayed)

Fresh and comprehensive reports from Capt. Charles A. Bond, commander of the Western Group, more clearly located the area of the warm-lake waters as a forty square-mile region that included bare dirt hills and deserted beaches. The reports said the region appeared "excellent for camp sites."

The region lies five miles inland from the edge of the assumed Knox Coast, at Longitude 101 East, some 110 miles from the open sea. It is an area more square than round, with one lake at about 200 feet above sea level and others at different altitudes.

The area has been named Bunger's Oasis, after Lieut. Comdr. David Bunger of Coronado, Calif., who piloted the Mariner patrol plane that first spotted the lakes.

The reports from the Western group, based on extensive interrogation of Commander Bunger's crew which landed on one of the lakes last Thursday, together with photographs taken, disclosed these added features of the discovery:

The lakes varied in colors, some were blue, others pea-soup green, or blue-green. Also there were brown and red in the water, the latter from rocky areas. Water samples showed algae and phosphate crystals.

Some lakes as long as three miles, along with innumerable small patches of water. Beaches up to several hundred yards long were sighted, most of them sloping.

Geologist Discusses Discovery

Aboard the Mount Olympus, the expedition's chief geologist, Dr. Arthur Howard of the United States Geological Survey, who lives in Washington, D. C., and at 2475 Thirty-eighth Street, Astoria, L. I., N. Y., said the lake region might owe its existence to an underlying mass of hot rock. He said the region might be somewhat like Yellowstone Park.

Dr. Howard, remarking that Mount Gauss was an extinct volcano and that Mount Erebus—1,700 miles to the east in the Victoria Land area—was still an active volcano, said there probably had been volcanic activity in the region of the lakes. He said other active volcanoes still might be found in East Antarctica along with more warm-water regions.

Planes Survey Unknown Area Of Antarctic

Combined United States Press Dispatch

ABOARD MOUNT OLYMPUS, Feb. 23—Mariner seaplanes of the Navy-Byrd Expedition's Western Group, which has circled halfway around the Antarctic continent, have penetrated again into little known areas. One flight found many mountains colored reddish brown with some peaks black, in the area of Queen Maud Land, south of Africa.

Red and black mountains were photographed Saturday by a Mariner of the Western Group flying over Princess Ragnhild Coast, which covers 300 miles along Queen Maud Land. The Western Group since late December has worked about halfway around the continent.

The flight, piloted by Lieut. W. R. Kreitzer of San Francisco, discovered that the charted coast of the Princess Ragnhild area actually is the edge of a shelf of ice and that the real coast probably lies farther inland. Mountains standing 6,000 to 10,000 feet have been found by earlier explorations seventy-five miles inland from the steep ice cliffs.

Another Mariner covering the Prince Olaf Coast area farther eastward simultaneously discovered a new glacier near Amundsen Bay and measured the Scott Mountain range as at least 6,000 feet high. The icecap in this area was found to be 4,000 feet in altitude. The plane was piloted by Lieut. Comdr. W. J. Rogers of Lake Worth, Fla.

The Mariners went exploring after the group's seaplane tender Currituck had moved 1,500 miles westward from the Land of Lakes oasis inland from the Knox Coast.

Second Antarctic Lake Oasis Described by Navy Explorers

Bodies of Green Water, Covering More Than 200 Square Miles, Found on Coastline

By Thomas R. Henry

WITH NAVY ANTARCTIC EXPEDITION, Mar. 6.—A second large Antarctic oasis which has been discovered by this expedition was described today by Rear Admiral Richard E. Byrd, expedition commander. It consists of a succession of green lakes, the largest more than 4 miles long, covering an area of more than 200 square miles.

This apparently is a region heated by some great underground furnace where glaciers have retreated. This is also indicated by little pack ice near the coast, which indicates that the water perhaps is heated.

The evidence of volcanic activity apparently is clearer here than in the larger oasis found a month ago. Long, straight black lines the width of a two-lane highway cross brown ice-free soil. These probably are the remains of old lava flows.

The same exploring party also found in the same vicinity, near the foot of Vestfold Mountains on Lars Christensen coast in longitude 78 east, a huge bay 90 miles wide extending about 70 miles into assumed coastline in which most of the Navy probably could anchor.

The lakes are colored blue-green mostly, but a few red and one black one were observed. The plane flew low enough to see lakes which were covered with thin new ice at the start of Antarctic winter, but certainly were open water a few days ago. Some of the lakes were dark green in color, growing bluish toward the banks.

The bodies of water were separated by brown and reddish hills of jumbled rocks with snow in crevasses. Some were as much as 200 feet high. The region is about 300 miles west of the larger oasis discovered by the same group.

WITH NAVY ANTARCTIC EXPEDITION, Feb. 23 (Delayed).—Like a scene on another planet is the range of crystal mountains nearly 3 miles high towering for at least 100 miles over one of the greatest ice shelfs on earth.

Perhaps the most titanic spectacle in the world, leaving Navy pilots in speechless awe, the range was discovered today in what was probably the expedition's farewell flight, marked by the fury with which the polar gales tossed the plane around over the ice mountains in the early Antartic winter.

They found themselves flying across a nice shelf dwarfing the Rockies, a shelf perhaps the third greatest in Antarctica, comparable in size to the 600,000-square-mile Ross Ice Shelf back of Little America. The towering walls of this new ice shelf lie above the sea at a spot hitherto marked as coast line. Thus the old Astrid Coast disappears.

The plane then turned southward to find entirely unanticipated mountains the pilots estimated to be more than 12,000 feet high, essentially uncrossable even with a plane. They followed these hitherto unknown mountains for nearly 100 miles and found no break. This chain apparently is a major link in a still vaster range which may prove the greatest in the world.

"It was like going to another world in a rocket ship," said the flight lieutenants.

The newly-discovered range is believed to be the western extremity of the Andes, proving the Pacific Ocean actually is a basin entirely surrounded by a great mountain wall from Alaska to Kamchatka. Beyond these mountains lies mysterious Enderby Land, supposedly a 3-mile high plateau extending toward the South Pole.

But this walled ice sea obviously was the lair of the spirit of the Antarctic winter at its worst and it was obvious that no other flights would be possible this year. The Currituck and attending ships turned, then, on the first lap of the long voyage home.

These new mountains were interpreted as the actual Astrid Coast line, constituting an unparalleled meeting of mountain and sea. At the most, they can only be a very narrow land shelf in front of gigantic ice precipices.

The region between the Eastern and Western groups of the now retiring expedition was Hitler's dream of an Antarctic empire, Schwabenland. This area, 600,000 square miles dotted with glaciers, mountains, lakes and islands, presumably have been named for Nazi officials and their sweethearts.

The German claim was based on one of the most efficient exploring jobs ever done in the Antarctic, the Schwabia Expedition in 1939, just before the outbreak of World War II.

One of the last exploratory flights to be made by expedition pilots was over one of the most remarkable Antarctic areas, Ingrid Christensen Coast. This coastline is ice free for 65 miles, with numerous fresh-water green lakes.

MODERN MAGELLANS—The rare opportunity to make new discoveries on our well-worn globe belongs to this group of U. S. Expedition fliers who found two oases and a new bay in the Antarctic. Left to right, front row, are Capt. J. E. Clark, USN, commanding the seaplane tender Currituck; Lieut. Comdr. W. J. Rogers, Jr., USN, who discovered oasis No. 2, and Lieut. Comdr. D. C. Bunger, USN, discoverer of oasis No. 1. Back row shows Lieut. W. R. Kreitzer, who first saw "Kreitzer's Bay;" Ensign A. J. Reynolds, USN; Lieut. J. C. Jennings, USN, and Lieut. R. H. Gillock, USN, members of the Western flight group.

Western Ships Leave Australia

MELBOURNE, Australia, March 20—Three ships of the Navy Antarctic expedition, the seaplane tender Currituck, the oiler Cacapon and the destroyer Henderson, left Sydney today after a six-day visit in which it is estimated the officers and men spent $180,000.

NAVY GOES 'ASHORE' AT LITTLE AMERICA

Equipment for Antarctic Base Pours From Cargo Ship Onto Bay of Whales Ice Shelf

By WALTER SULLIVAN

ABOARD MOUNT OLYMPUS, Off the Bay of Whales, Jan. 16—Completing a 10,000-mile voyage southward from Norfolk, Va., the main body of the Navy's Antarctic expedition arrived at Little America yesterday morning.

The party has found the Bay of Whales open and the most recent site of Little America intact with flagpole, radio mast and building vents standing up above the snow.

The icebreaker North Wind entered the Bay of Whales at 9 A. M., local time (3 P. M. Eastern Standard time) yesterday.

The reconnaissance party consisted of Comdr. Clifford M. Campbell, prospective base commander; Comdr. Charles O. Reinhardt, construction chief; Lieut. Comdr. James C. McCoy, veteran flier from the 1940-41 expedition; Capt. Verdon D. Boyd of the Marine Corps Reserve, head of transportation, and Dr. Paul A. Siple, chief Army observer and veteran of all previous Byrd expeditions.

The Bay of Whales has played a more prominent part in Antarctic exploration than any other single spot. This is primarily because it has provided a good harbor at the most southerly point any ship ever reached—about 700 miles from the South Pole.

Here Robert Scott, the Englishman, was the first to take to the air over Antarctica, making a balloon ascent in 1902. Here Roald Amundsen, the Norwegian, in 1910, built Framheim, the base from which he made the first successful assault on the pole in 1912.

The bay is a self-sustaining indentation in the seaward face of the Ross shelf ice. The shelf is a northward-creeping ice blanket 500 or more feet thick that is drained off the continent and covers a gulf vaster than Texas. It flows toward the ocean at from one to seven feet daily. Thus every expedition that has sailed into the Bay of Whales since it was discovered by Ross in 1842 has given it a different description.

After the North Wind completed her first tour of the bay yesterday, she came back out through the opening that appears about 300 yards wide. While the other ships hove to outside, she picked up Admiral Cruzen and the reconnaissance party.

By ALTON L. BLAKESLEE

BAY OF WHALES, Antarctica, Jan. 18—The cargo ship Yancey began unloading trucks, jeeps, tractors and other supplies today for the Navy expedition's base in Antarctica on a new Little America site.

The Yancey's crew, directed by a loudspeaker on the ship, was soon at work getting supplies over the side. The temperature rose to 29 and some o the men worked in shirtsleeves.

By mid-morning the Yancey, which is equipped with a thirty-ton crane, had several trucks, two jeeps, two power sleds, four tractors and large timbers for bridging out on the ice shelf.

ABOARD THE U. S. S. MOUNT OLYMPUS, at Little America, Jan. 23 (AP)—A tent town and an air strip stood complete at Little America today as a vctory over Antarctica's ice, but perhaps in only a few weeks the ice will win the inevitable triumph, driving men and ships away.

The town of 50 army tents in orderly array and adjacent air strip atop a glacier were completed in a few days by 175 seabees.

The cargo ships Yancey and Merrick and the headquarters ship, Mount Olympus, totaling 35,000 tons, are tied up at the edge of the ice, making the Bay of Whales Antarctica's largest port, just as the tent town accommodating 300 men is the largest settlement.

The Polar Times

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AUGUST HOWARD, Editor

THE POLAR TIMES highly recommends "The Polar Record," published January and July by the Scott Polar Research Institute, Cambridge, England.

The American Polar Society was founded Nov. 29, 1934, to band together all persons interested in polar exploration. Membership dues are one dollar a year, which entitles members to receive THE POLAR TIMES twice a year.

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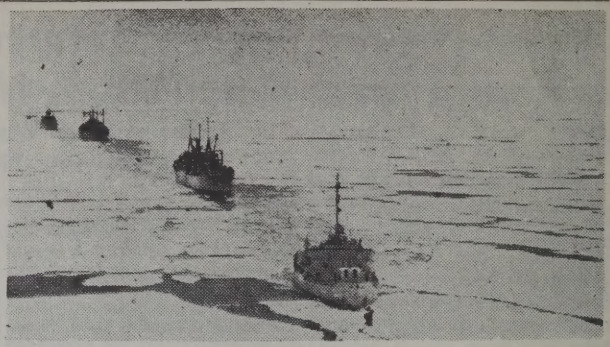


Led by the icebreaker Northwind, ships of the central group of the Navy's Antarctic Expedition, break through pack ice

Ships Break Through Ice Pack, Covering 600 Miles in 14 Days

By Thomas R. Henry

WITH THE NAVY ANTARCTIC EXPEDITION, Jan. 15.—The four-ship Navy flotilla yesterday completed a 14-day crash through more than 600 miles of the Antarctic ice pack, setting a world record in ice navigation by a long margin.

More than half the way the ice-field was almost unbroken, and at least 3 feet thick. The flotilla broke through one ice rib estimated to be 30 feet thick and at least 100 feet wide.

For 400 miles the trackless expanse of ice was broken only by occasional lakes of open water. Only below 75 degrees south latitude did the ice decrease so the ships could sail most of the time in water. Although the average speed was 50 miles a day, there were days of no progress and others when ships were swept backward by ice drift as much as 6 miles.

This, with one possible exception, was the largest ice pack ever known in Antarctic summer. Sir James Ross in 1842 reported ice covering 800 miles from north to south.

If the record is accurate, says Rear Admiral Richard H. Cruzen, expedition commander, the ice must have been very thin, as after two futile attempts Sir James' wooden ship Erebus went through in four days. Probably he went 800 miles in all three efforts to escape.

The heavy pack this year, almost twice the size expected, is believed due to the lack of storms to break up the drifting ice. The open water finally reached had a nearly ripple-less surface.

Meeting the heavy ice pack was fortunate for the Navy experiment, findings from which are expected to add greatly to the undeveloped science of ice navigation.

Little America Six Years Later: 1941 Note and Food Still There

By ALTON L. BLAKESLEE
Associated Press Correspondent

WITH NAVY EXPEDITION, at the Bay of Whales, Jan. 16 (Delayed)—The writer dropped through a skylight today into the sub-zero buildings and tunnels of the last site of Little America, buried under twenty feet of snow where everything was perfectly preserved and untouched since the camp was abandoned six years ago.

Eleven men in our scouting party, surveying a site for a new Antarctic base and airfield, came to the camp of Rear Admiral Richard E. Byrd's 1939-41 expedition. For three of them, this was a gleeful homecoming.

By the light of a flashlight and lanterns they shouted their discoveries of old bunks and surplus supplies in the camp they left on Feb. 1, 1941.

No one had set foot inside the buildings and interconnecting tunnels since then until today, when we pierced through the snow cover. The buildings are now completely buried in glacier snow and ice. We couldn't stay long inside, where the temperature was below zero, possibly 10 to 20 degrees below, while on top of the camp it was perhaps 25 degrees above zero even with the wind blowing.

The writer had luncheon inside, consisting of a 7-year-old graham cracker. Icicles of beautiful crystallized design hung from the ceilings.

The narrow tunnels are jumbled with huge stores of food, pails, dynamite, nails and junk. We found a couple of chickens and hams well frozen and in the galley there were steaks already cut, waiting only to be grilled when thirty men abandoned camp after spending thirteen months there.

A movie advertising poster of 1940, cans of peaches, socks hanging from rafters, a big box of candy, stirred memories that thrilled the three veterans, Dr. Paul Siple of Erie, Pa., who commanded the 1940-41 base; Lieut. Comdr. James C. McCoy of Dunn, N. C., and Marine Capt. Vernon D. Boyd of Arlington, Va.

Dr. Siple looked first for a note on a table in the center of the room, bearing a message giving an inventory of all supplies left there and saying it was United States property. But Boyd already had picked it up for him. This is proof, says Dr. Siple, that no one had visited the camp in six years' absence. When the expedition left in 1941 Dr. Siple had noticed a Japanese whaler in the vicinity and wondered if the Japanese ever came to the base.

Boyd found an old fur parka, still shedding fur as it always had, so he left it again. He also found January, 1941, weather observations that had been overlooked by the meterologist, Dr. Arnold Court of Norman, Okla., when the camp was abandoned.

This was Little America III. The sites of Little America I and II were some six miles north.

The note said:

"Welcome to Little America III, If you need food or shelter you are welcome to anything we have.

"However, if you are visiting and not in need of food or materials it is sincerely requested that you leave all materials as you find them. Property in this camp is that of the United States government and is not abandoned to salvage but is left here for future use.

"Any materials removed should be inventoried and later reported to the United States Government."

Byrd Lands in Little America, Flying From Carrier in 6 Hours

By WALTER SULLIVAN

LITTLE AMERICA, Jan. 30 — Rear Admiral Richard E. Byrd arrived here today by an unprecedented flight over the Ross ice pack from the airplane carrier Philippine Sea.

The 58-year-old explorer and naval aviator — the only man to have flown over both the North and the South Poles—rode one of two Douglas transports that took off from the deck of the carrier, 585 airline miles to the northwest. His plane alighted with skis on the Antarctic snow here at 5:18 A. M., Little America time (11:18 A. M., Eastern standard time).

The second plane skidded in at 5:25 A. M. from the six-hour flight. Four other Douglases from the carrier followed in pairs at three-hour intervals, and the last of them was on the Little America airstrip at 2:06 P. M.

A sudden spell of bad weather late in the morning made navigation difficult for the last pair. Radio descriptions of the edge of the barrier and the position of this base finally guided the sixth plane in.

Standing at the edge of the snow-swept air strip to meet Admiral Byrd was Rear Admiral Richard H. Cruzen, commander of Task Force 68. Admiral Byrd now heads the technical and exploratory aspects of the expedition on behalf of the Navy Department; Admiral Cruzen retains the operational command.

Admiral Byrd's six-plane group had been waiting on the Philippine Sea southeast of Scott Island since late Saturday for a break in the weather. The planes, among the biggest ever to fly from a carrier, had jet apparatus for the start.

The flight call came last night.

The first plane with Admiral Byrd was piloted by Comdr. William M. Hawkes of Jersey City, N. J., the flight commander, and was named the Notre Dame after the alma mater of its skipper.

At 11:13 o'clock Commander Hawkes lifted the plane into the air, fifty feet short of the end of the flight deck, in a cloud of smoke from the jet boosters.

He circled for seventeen minutes while the second plane got off. The destroyer Brownson lurked astern ready to dash to a rescue in case either plane splashed. The planes lifted their ski-wheel landing gear into cavities under the engines and headed southeast over the pack.

Five men flew in each plane, most of the weight-carrying capacity being conserved for extra fuel tanks. Spare parts for the Douglases and their heavy mapping cameras were brought down aboard the ships. Each plane will carry seven cameras of various kinds on exploratory flights east, west and south of here.

In Admiral Byrd's plane, besides Commander Hawkes, were Lieut. (j.g.) Harry W. Summers, co-pilot, of Wabash, Ind.; Lieut. (j.g.) Robert P. Heekin of West Los Angeles, Calif., and Aviation Radioman James J. Nyhan Jr. of Chicago.

The second plane was skippered by Capt. Eugene C. McIntyre, Marine Corps, of San Diego, Calif. His crew included Capt. Robert D. Limberg, Marine Corps, of North Hollywood, Calif.; 1st Lieut. Colgar D. Pitman of Seattle, Master Sgt. Peter Vargo, radioman, and Robert Dairs of Boise, Idaho, airline aide to Admiral Byrd.

An hour and a half away from the carrier, the planes saw the icebreaker North Wind, caught in such tough pack ice that she had to blast her way with explosives. The ship was looking for them, and the planes roared past her at a little above masthead height.

Coming in over Discovery Inlet, the planes found rows of tents at Little America and the Bay of Whales sparkling under the first virtually cloudless day since the expedition arrived here two weeks ago. It was also the coldest day so far, with zero temperatures.

Commander Hawkes saw the smoke pots marking the runway and set down the largest plane ever to reach Antarctica.

"Well, we're home again!" Admiral Byrd exclaimed as he stepped from his plane.

BYRD'S CARRIER LOSES HELICOPTER; 3 SAVED

ABOARD MOUNT OLYMPUS, at Little America, Jan. 22 (Delayed) (AP)—A helicopter crashed into the ocean and was lost today on a take-off from the carrier Philippine Sea off Scott Island some 700 miles north of here, but its occupants were rescued unharmed.

Three men in the Philippine Sea's lost helicopter, who were rescued from the sea, were identified as Lieut. Comdr. Charles Tanner of Sikeston, Mo., the pilot; Seaman Charles Kelso of Akron, Ohio, and Machinist's Mate Arthur Nybert of Erie, Pa. Robert Reuben, National Broadcasting Company correspondent, reported this from the carrier. He said Capt. Delbert Cornwell of Philippi, W. Va., skipper of the carrier, brought the Philippine Sea to a sudden stop to effect the rescue.

Submarine Quits Trying To Pierce Antarctic Ice

LITTLE AMERICA, Jan. 18 (delayed) (AP).—Rear Admiral Richard H. Cruzen announced tonight that the submarine Sennet would abandon its attempt to penetrate the ice pack around Little America and would start back to the United States about Feb. 1. "There's just too much ice," Cruzen said.

The submarine tried unsuccessfully to get through the pack with the other ships of the central task group of the United States Navy's Antarctic expedition. But after five days of battling the ice the task proved too dangerous, and the Sennet was led back to the vicinity of Scott Island by the icebreaker North Wind. The North Wind then returned and led the flagship Mt. Olympus and the cargo ships Yancey and Merrick on to Little America.

The Sennet is now making under-water studies of temperatures, salinity and microscopic life in the vicinity of Scott Island. Cruzen said it would make no under-ice tests, because they are "not particularly worth while in that neck of the woods."

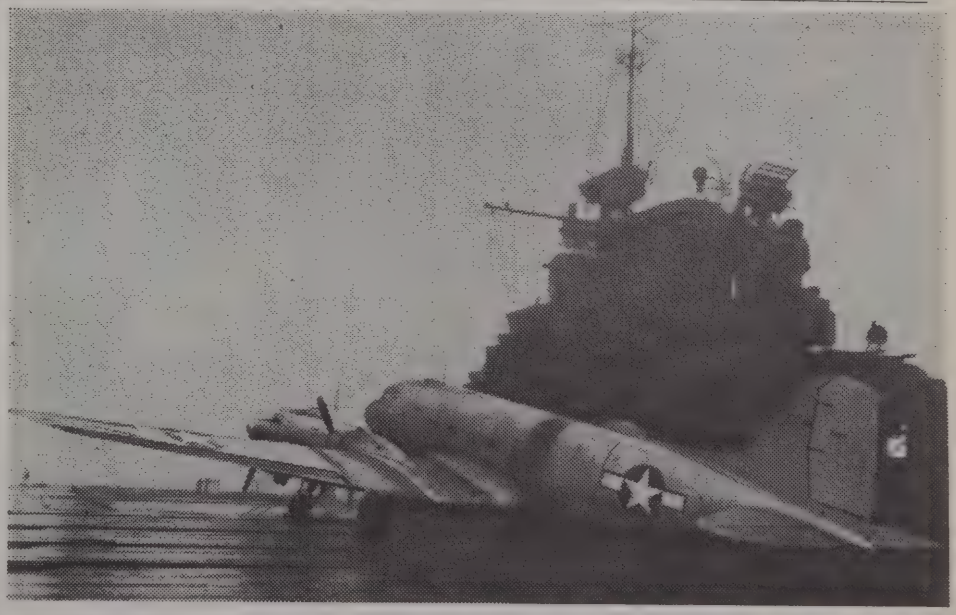
The submarine Sennet

BIG CARRIER RETURNS

BALBOA, Canal Zone, Feb. 18—The United States aircraft carrier Philippine Sea arrived here today from the Antarctic just in time for her crew to celebrate the last day of Panama's annual carnival.

QUONSET POINT, R. I., Feb. 28 (AP)—With 19,000 nautical miles behind her, the Navy's huge aircraft carrier, Philippine Sea, lay at anchor here today.

Among the "first" chalked up by the ship are first carrier to operate in the South Pole seas, reaching latitude 69 near the 180th meridian; first carrier to launch R-4-D's; first in a South Pole expedition and first ship back from the task force.



TO SCOUT THE SOUTH POLE—On the deck of the USS Philippine Sea, Navy carrier en route to the South Polar region, with Rear Admiral Richard E. Byrd, this Navy R4D will have duty with the training and exploratory expedition. Twin-engined plane will be "jato" (jet assisted take-off).

'OLD-TIMERS' VISIT LITTLE AMERICA I

Siple Leads Party to '28 Site, Buried, Except for Radio-Mast Tips, Under 50-Foot Snows

By WALTER SULLIVAN

LITTLE AMERICA, Jan. 25 (Delayed)—Little America I, the camp of Rear Admiral Richard E. Byrd's 1928-29 Antarctic expedition and base for the only flight over the South Pole, was revisited today for the first time in six years.

This lost city, eleven years abondoned, is buried under fifty feet of snow and contorted by the movement of the barrier ice, although it is better preserved than two of its former inhabitants, who were along on the day's trip, had believed would be possible.

The inspection of the old site was made during a twenty-five-mile journey by windsled across the icefields. The purpose of the trip was to locate survey markers, placed by the former expeditions here, for triangulation in the study of the seaward flow of the continental ice cap.

The party consisted of Dr. Siple, who has spent three winters in Little America; Amory H. Waite of Long Branch, N. J., Army Signal Corps observer and also former resident of the old camp; 1st Lieut. John H. Roscoe of the Marine Corps, who is helping Siple with the ice studies, and this correspondent

When we reached the old site, the highest of three towers of the Adolph S. Ochs radio station protruded twenty feet above the packed snow. Atop it the three blades of the wind-driven generator were still spinning.

This tower and the other two at the points of the triangle lean 10 to 15 degrees from the vertical. One sticks out only ten feet above the crusty surface. When built in 1929 the pyramidal girders stood seventy feet high. Between them stretched antennae, which one can now easily reach and grasp.

The towers are all of Little America I that remains above the surface. The fourteen buildings with their connecting tunnels must be fifty feet below. Atop them in 1933-34 was built Little America II, and its ten radio masts still peep above the snow.

Not a bump betrays the presence of the buildings of either of the camps. The heavy wooden poles of the newer radio masts testify to the ice movement underneath. Some lean as much as 40 degrees.

Dr. Siple found a neat round hole in the snow. It was the top of a smoke pipe absolutely flush with the surface. With a long copper tube Mr. Waite began probing the snow near by. Five feet down he hit a roof.

"The mess hall," he exclaimed.

It was a unit of the second camp and had been connected to the older buildings by a descending tunnel. With much digging it might be possible to enter the more recent camp, but there is little hope that the older, deeper buildings have survived the pressures of flowing ice and accumulated snow.

LITTLE AMERICA, Feb. 3 (Delayed) (AP)—Admiral Byrd, revisiting the deep-buried ice caves he built in 1928 and 1933, lunched today on Eskimo biscuits baked nearly twenty years ago and tasted long-frozen apples, candied pineapple, tuna fish and chocolate.

But his biggest discovery was a favorite and forgotten old corncob pipe, still loaded with tobacco, which he lit and murmured:

"Good. Damn good! Just the right dampness to the tobacco."

Admiral Byrd also found a tight-sealed can of his favorite coffee brand which he said he had been unable to buy at home in the United States.

Along with newsmen and other member of the Navy's South Polar expedition, now drawing to its close, Admiral Byrd slid down a snowy chute-the-chute to reach the eerie crystal caverns of his first two camps in Little America.

Men Splash 21 Minutes in Antarctic to Test New Rubber Swim Suits

Little America, Feb. 4—(Delayed)—(AP)—Fifteen men, imitating polar bears, splashed and swam for 21 minutes today in the ice-choked, 30-degree water of the Bay of Whales to test new rubber swim suits.

The men were all expert swimmers of underwater demolition team No. 4 with the U. S. Navy's Antarctic task force.

They wore heavy underwear, socks and gloves underneath skin-tight green suits, first designed for the invasion of Japan.

Commander Harry G. Eisberg, medical officer, said that without protection they probably would have suffered fatal exposure within five or six minutes.

As it was, a medical checkup showed no harmful effects and only slight temperature changes. Some had numb or aching hands, feet and faces.

Lieutenant (jg) Hal Iverson, of Savannah, Ga., led his 14-man team in the frigid experiment. The men, moving through slushy ice a quarter of an inch to two inches thick, stayed close to the flagship Mount Olympus and an attending boat with ropes attached to their backs. One ate ice cream while lolling in the water.

A lookout meanwhile kept his eyes peeled for killer whales; none appeared.

Four men had to leave the water within six to 14 minutes because icy water entered their suits, through rips or face openings. The air temperature was 27 degrees.

Iverson reported numbness gradually creeping over fingers and feet. He said that for the first six minutes he did not notice the cold. However, he added, it soon became apparent, because the tight suit impeded blood circulation and in the ice he could not swim far to work up body heat.

The shivering men, coming from the water, rushed to their own quarters, where pulse rates, blood pressure and mouth and internal temperatures were measured and compared with measurements made before the tests. Some went into a hot steam room. All gulped two ounces of bourbon, to the envy of other crewmen.

Underwater demolitioners are swimming explosive experts trained for pre-invasion reconnaissance of enemy beaches, for clearing obstacles to beachheads or under water and for attaching mines to enemy ships. They learn to swim without splashing. The coldest water any ever swam in before today is believed to have been 48 degrees.

Seaman Killed Ashore In Antarctic Unloading

LITTLE AMERICA, Jan. 21—A young sailor from the attack cargo ship Yancey became the first American to die in Little America today when he apparently was thrown into the spinning track of one of the vehicles on the ice. He probably was killed instantly by a blow on the head.

Washington, Jan. 23—(AP)—The Navy has identified the seaman killed during unloading operations at Little America as Vance N. Woodall, whose parents live at Somerset, Ky.

FIRST CHURCH RITES HELD IN ANTARCTICA

Little America, Jan. 26 (Delayed) (A. P.).—A little group of Americans gathered in a tent today for services consecrating the snow-capped continent of antarctica to Christianity.

Praying that the huge, ice-covered lands always remain free of man-made wars, Lieut.-Commander William J. Menster of Dubuque, Iowa, Navy chaplain, called for a renewal of faith in God and for justice and peace among nations and continents of the earth.

Menster said he believed it was the first church service ever held on the continent. Led by Rear Admiral Richard H. Cruzen, task force commander, seventy officers and men attended the services.

'Alligator' Expedition Leaves Little America

LITTLE AMERICA, Feb. 12 (Delayed) (AP).—Two "Alligator" amphibious landing craft, of the type which won fame crawling across coral reefs in wartime invasions, snorted and rattled off across the powdery snow east of Little America today in the first long-range "trail party" of Operation High Jump.

The Alligators, whose caterpillar treads enable them to travel where wheeled traffic might sink into soft snow, are expected to make 10 miles per hour in the best going and average 5 m.p.h. for the trip.

Each Alligator pulled a "go-devil" sled, loaded with eight and one-half tons of cargo, and, in addition, one had a one-ton quartermaster sled hitched behind the go-devil. A tented tarpaulin, rigged over each of the vehicles, provided a sheltered space where the men could spread their sleeping bags on cots.

The second-in-command of the trail party is Marine Lt. Roger B. Thompson of Los Angeles. Army Maj. Dan Crozier of Athens, W. Va., is medical officer and weather observer for the expedition.

LITTLE AMERICA, Feb. 19 (Delayed)—The Navy-Byrd expedition's mechanized trail party churned into camp today after having covered 245 miles.

The party was recalled because the need for the emergency landing area in southern Marie Byrd Land has been reduced by the near-completion of flights in that direction.

The venture showed the landing vehicle, tracked, LVT, to be the first ideal automotive transport for the Antarctic. According to the trail party's chief, Marine Capt. Vernon D. Boyd, this warproved amphibious vehicle is the forerunner without radical modification of the polar prime mover of the future.

The party's two tank-like monsters, with small American flags flying and three cargo sleds in tow, arrived here after a final dash covering eighty-eight miles in fourteen hours. The seven men reported extreme cold on the trip

The trail party reached the Rockefeller Mountains and left aviation gasoline supplies there before its return. The men found the Fokker plane wrecked during the 1928-29 Byrd expedition still lying on its back with only the wings buried.

The LVT's rattled up to the rocky summit of Mount Helen Washington, 1,800 feet high, before they were turned back to Little America.

3 NAVY SHIPS SENT OFF NORTH BY BYRD

ABOARD MOUNT OLYMPUS in Ross Sea, Feb. 7—Three thin-skinned ships of the Navy's Antarctic expedition sailed from Little America last night, seeking safe passage through the formidable Ross Sea ice pack. Rear Admiral Richard E. Byrd and 197 men were left behind for a three-week stay in the tent town of Little America on the windswept barrier ice.

Rear Admiral Richard H. Cruzen, executive officer, went aboard the icebreaker North Wind yesterday to lead the Mount Olympus and the cargo ships Yancey and Merrick northward through the pack.

Aboard the USS Mt. Olympus at Little America, Jan. 20—(Delayed)

The ice breaker Northwind left this afternoon to renegotiate the icepack and meet the carrier Philippine Sea near Scott Island. It carried thousands of pieces of mail for stamp collectors, plus the many personal letters of expedition members.

Lofty Uncharted Mountains Found In Mid-Antarctica by Byrd Fliers

By WALTER SULLIVAN

LITTLE AMERICA, Feb. 14 (Delayed) — Douglas transport planes made today the first successful, major exploratory flights from this base of the Navy's Antarctic expedition.

Southeast of Little America, in a region roughly 180 miles from the South Pole, the fliers encountered an uncharted mountain wall. It was so high that the crew of one plane that reached the new range, becoming groggy at 13,000 feet without an oxygen supply, was unable to get the added elevation necessary to find a crossing.

Rear Admiral Richard E. Byrd, chief of the expedition, went on one of the first two of four flights made during the day.

The big ski-equipped photographic planes, after four weeks of preparation and waiting for weather, finally reached out into the unknown. Even then the plane in which Admiral Byrd was riding developed trouble at its remotest reach over the Polar Plateau due south of here.

Admiral Byrd's plane, the first out, traced to the eastward a continuation of the great mountain system already known to run 1,300 miles from Victoria Land, on the western side of the Ross Sea, through the Queen Maud Range.

It was the second plane that winged for more than 100 miles along the new, unmapped mountains. Flying southeast from here, it passed on the left one range estimated by the plane commander, Lieut. George H. Anderson of Holly Springs, Miss., at 13,000 to 15,000 feet high. This was in roughly the position shown for the Horlick Mountains. That far the fliers met almost no clouds.

Then they saw a great mountain wall ahead, with clouds hugging the base. They began the climb and turned to the left—eastward—to follow this range.

They observed no peaks or passes, Lieutenant Anderson said, just a continuous escarpment of reddish rock, which was photographed with color film for study by geologists. The large triple mapping cameras automatically made a record of all that was seen.

The plane carried no oxygen tanks, in order to provide for the weight of the extra polar survival gear which was regarded as more important.

At 180 miles beyond the Horlick Mountains with the South Pole about the same distance to the right of the plane, the co-pilot, Lieut. (j.g.) William K. Martin of Springfield, Mo., who was at the controls, saw an especially high mass rock and snow ahead and to the right. The rest of the ridge was about 15,000 feet, but Lieutenant Martin thought this mountain might be even higher.

They had been flying at 13,000 feet for forty-five minutes Lieutenant Martin said, when the landscape suddenly turned pink to him and he "began to have that I-don't-care feeling, so Andie took over."

"We didn't have any business fooling around at 13,000 feet," Lieutenant Anderson recounted, "and if we stayed there, all of us might begin getting goofy."

So he turned the plane back for Little America. During this long glide to a lower altitude, Lieutenant Anderson kept hitting Lieutenant Martin to prevent him from dozing off in a stupor.

Link to Palmer Land Seen

The fliers put the location of the newly-discovered mountains at about 700 miles southeast of Little America.

Admiral Byrd believes Antarctica to be a single continental mass. He hopes to prove it by finding a link between this new mountain system and that of the Palmer Land peninsula, south of the tip of South America.

The great escarpment scouted by Lieutenant Anderson's plane trended in a more westerly direction toward Coats Land. However, it might have a spur thrusting northward beyond the region sighted on this flight.

As the first two planes landed back here, another flight of two Douglases was preparing to pick up where the first left off.

The planes of the No. 2 flight returned just before midnight. The second one—the fourth plane out—flew southeastward and got within sight of the newly discovered range, but an undercast prevented detailed observation. The other plane went to the southwest over the Queen Maud Range across the Beardmore Glacier. Clouds above the Polar Plateau likewise turned it back.

The first plane with Admiral Byrd aboard took off easily in bright sub-zero weather that made the snow of the airstrip squeek under foot and fast for the planes' skis.

The second plane—Lieutenant Anderson's—was frozen to the surface. While Admiral Byrd's plane left vapor trails circling high overhead, ground crews pounded the skis of the stuck plane with sledge hammers and wielded shovels and heavy beams. The pilot roared his engines until the tail was leaping and the whole fuselage shaking in the struggle to break loose. The first plane headed south alone.

After a fifth try the second plane broke loose, pelted the men who were wiggling its wings with a hail of snow pellets and soared into the sky with a swishing roar of its jet take-off equipment.

Admiral Byrd's plane was piloted by Maj. Robert R. Weir of Philadelphia, with Lieut. (j. g.) Harry W. Summers of Wabash, Ind., as co-pilot.

With cloud banks to the east, the plane climbed steadily as it flew southward to the Queen Maud Range, 400 miles from Little America. At the mountains it soared onto the Polar Plateau up the Thorne Glacier.

This is one of several glaciers pouring ice into the Ross Shelf on which Little America is built. All attacks on the South Pole have been made up these glaciers.

Admiral Byrd said that in the crystal-clear air he saw about 200 miles to the west the debouchment of the Beardmore Glacier, where Scott and Shackleton climbed onto the Polar Plateau.

Looking tired after the ten-hour flight, Admiral Byrd told how, beyond the Queen Maud Range, his plane turned southeastward and flew about sixty-five miles across the Polar Plateau to perhaps 150 miles from the Pole. It passed "good-sized mountains" on the left and saw more ahead. Admiral Byrd believed the latter were the southern side of the range seen by Lieutenant Anderson and his crew.

To the west of the same region Roald Amundsen on his return journey from the Pole thought he saw in latitude 88 "a mighty range running to the southeast." Admiral Byrd's flights have been unable to find this range; and the Admiral said today that he thought Amundsen had seen a mirage-reflection of the newly discovered mountains.

Over the high plateau the oil pressure of Admiral Byrd's plane suddenly dropped to half of normal. Major Weir and Lieutenant Summers agreed afterward it was "a very lonely feeling" to face engine trouble way out there.

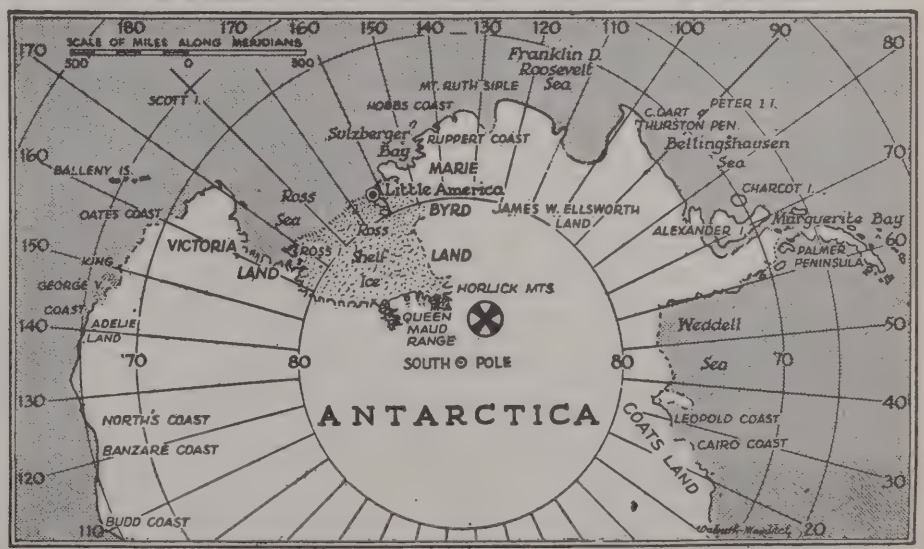
They headed back, and with warmer air below the Polar Plateau the pressure was regained. They flew 100 miles to the east, and Admiral Byrd believes their photo-mapping linked up in the region of the new mountains with that of Lieutenant Anderson.

The crews of both planes observed a tremendous multiple crack in the Ross Shelf that Admiral Byrd estimated was half a mile wide and hundreds of miles long.

The remainder of the crew on Anderson's plane were Lieut. (j. g.) S. J. Linn of Edmond, Okla., navigator; Lieut. (j. g.) William Martin, Springfield, Mo., co-pilot; Aviation Radioman First Class Joseph Valinski of Simpson, Pa.

The others in Weir's plane were Lieut. (j. g.) Harry Summers of Wabash, Ind., co-pilot; Marine Master Sgt. Andrew Mincey, Waycross, Ga., radioman; Marine Sgt. George Baldwin of Millbrook, N. Y., photographer, and Marine Capt. Raymond Butters, navigator, Dorchester, Mass.

NAVY FLIERS DISCOVER RANGE IN THE ANTARCTIC



Flying southeast from their Little America base to an area 180 miles beyond the already-charted Horlick Mountains (cross), airmen of the Navy expedition found an uncharted mountain wall so high that they became groggy without an oxygen supply and turned back.

Byrd Hops Over South Pole Again; Drops All U. N. Flags, Flies Beyond

By WALTER SULLIVAN

LITTLE AMERICA, Feb. 16 (Delayed)—Rear Admiral Richard E. Byrd, the only man to fly over both Poles, again flew over the South Pole today and beyond it, riding one of two planes on an exploration flight from here.

The two Douglas transports of the Navy Antarctic expedition flew across Queen Maud Range to the Polar Plateau through the pass of the Wade Glacier.

Admiral Byrd and his accompanying plane then soared along the 180th meridian across the Pole and eighty-six miles into the vast, hitherto unseen region beyond the Pole.

Over the Pole, Admiral Byrd dropped a carton containing the flags of all fifty-four member states of the United Nations. The two planes circled for ten minutes.

On his South Polar flight of Nov. 29, 1929, Admiral Byrd had dropped at the Pole a British flag in honor of Scott and an American flag weighted with a stone from the grave of Floyd Bennett, who had flown over the North Pole with Admiral Byrd on May 9, 1926.

Admiral Byrd timed his reaching the South Pole today at 1600 Greenwich (11 A. M., Sunday, Eastern standard time, or 5 A. M., Little America time).

After leaving the Pole Admiral Byrd swung the planes to the right to explore the region that he has described as "the most inaccessible area on the face of the earth."

Little America was in touch with him by radio, and reported to him that high winds here were increasing, whipping snow over the airstrip.

With 75,000 square miles of the newly discovered region photographed, the Byrd planes then headed back. They climbed above the Queen Maud Range, crossing between the Wade and Beardmore glaciers.

Just as Admiral Byrd's plane glided over the airstrip for a landing, one trimming vane of its skis dropped down and hung under the plane. With a roar of the engines, Lieut. George Anderson, the pilot, rose into the air until the vane could be knocked off.

The polar planes took off for the flight just before 11 P. M. Saturday. They were back at 11:45 A. M., Sunday.

The accompanying plane on the Polar flight was piloted by Comdr. Clifford M. Campbell, executive officer of the Little America base.

At the Pole, where the planes circled at an altitude of 12,000 feet—about 2,000 feet above the icecap—he saw no sign of the beacons left by Amundsen and Scott, Admiral Byrd said. All the newly seen section of the plateau was flat, but nearer the Queen Maud Range the fliers discovered more mountains.

The temperature in the planes at the Pole—neither plane had heating or oxygen equipment—was 40 below zero Fahrenheit. The crews constantly scraped ice off the windshields and swabbed them with alcohol during the flight.

New York, Feb. 18—(AP)—Delayed despatches from Little America disclosed today that a Philadelphian piloted a plane that accompanied Admiral Byrd in his flight over the South Pole on Sunday.

He was Marine Corps Major Robert R. Weir. 1311 W. Sharpnack st.

The men on the Byrd plane were Navy Lieutenant George Anderson, Holly Springs, Miss., pilot; Lieutenant Commander James C. McCoy, Bunn, N. C., who flew a Condor plane on exploratory missions for the last Byrd expedition, co-pilot; Lieutenant (jg) Robert P. Keekin, West Los Angeles, navigator; Joseph Valinski, radioman, Simpson, Pa., and Photographer's Mate First Class Kenneth Swain, Bloomdale, O., photographer.

The men on the other plane beside Weir were a Commander Campbell; Marine Captain Eugene G. McIntyre, San Diego, co-pilot; Marine Captain Raymond Butters, Dorchester, Mass., navigator; Marine Master Sergeant Andrew Mincey, Waycross, Ga., radioman, and Marine Sergeant George Baldwin, Lynbrook, N. Y., photographer.

At a news conference after his return, Byrd commented:

"Mountains that don't show on the map are everywhere out there."

The two planes followed each other in a circle around the Pole which took them "around the world in 10 minutes." After circling the Pole, they continued their original course for 81 miles beyond, veered 86 miles to the right, and then turned back to Little America.

Byrd said that if there had been any mountain within 100 miles of the pole in any direction they could have seen it. However, they saw no break in the unending, flat expanse of icecap that comprises the world's largest and highest plateau.

Byrd said that it was the first time in history that anyone has gone any appreciable distance beyond the pole. He went about ten miles past it on his 1929 flight.

It was so cold on the trip that the automatic pilots failed to work and the pilots and co-pilots were forced to handle the planes manually all the way.

Byrd said that once he saw a lot of smoke at the back end of his plane and rushed back to put out the fire. He found that radioman Valinski had left a coffee pot on an electric plate, and that the "smoke" was actually a cloud of steam.

New Navy Charts Are Designed For Use of South Pole Flyers

By Thomas R. Henry

NAVY ANTARCTIC BASE, Jan. 30.—The world was turned upside down in a new map system being tested here for planes navigating in South Pole areas.

A series of charts was prepared especially for this expedition by the Navy Hydrographic Office. The North and South Poles are placed deliberately on opposite sides of the earth at the points where the Equator and the 180th meridian longitude cross. The International Date Line, which passes through the Ross Sea, becomes the Equator.

Then the surface of the globe is projected on a flat map which can be used in navigation. This is known as an "inverse mercator."

Nearly all familiar maps are drawn according to the so-called mercator projection in order to picture what is actually a curved surface on a flat surface. This results in a very great distortion of polar areas.

Most maps, for example, show Greenland as larger than the United States, although it really is much smaller. Little distortion is caused in the middle latitudes and navigation around the Equator is almost as simple as if the earth actually were a flat surface and great circles were straight lines.

In polar latitudes, navigation by such maps is extremely difficult and complicated; especially in a fast-moving plane. The meridians of longitude get closer together as a plane nears the pole. These lines finally merge altogether and time as a navigation guide loses all meaning.

The magnetic compass also is useless. Reversed earth maps distort equatorial regions, but polar areas appear in proper perspectives. Such maps were developed for air navigation near the North Pole late in the war, but were never officially adopted, and special experimental charts were made up for flyers over the trackless wastes of the South polar area.

Here, navigation is much more difficult than in the north due to the absence of landmarks.

GEOLOGIST'S PLANE MAPS ANTARCTICA

Observer Describes Flight East of Little America, Using Magnetic-Record Device

By WALTER SULLIVAN

IN FLIGHT OVER ANTARCTICA, Feb. 20 (Delayed)—This plane, on a flight east of Little America, is conducting what is probably the first aerial magnetic survey in the Southern Hemisphere.

On a long cable hanging from the Douglas transport trails a sensitive instrument that detects infinitesimal variations in the magnetism of the earth beneath the Antarctic icecap. Thus the formation and contours of the continental rocks becomes known.

We are flying westward at about 5,000 feet above the cliffs of congealed snow that mark the coast of Edward VII Peninsula. A ribbon of water along the cliffs is a luminous green, otherwise the sea is dark blue. No land is visible.

Back in the body of the plane, James R. Balsley of the United States Geological Survey, a Stamford, Conn., man, is operating the knobs and eyeing the dials of the magnetometer. This is the instrument that records the earth's magnetic intensity on a moving roll of paper. Near it is a hand winch whereby, once the plane was aloft, Dr. Balsley lowered a bombshaped "bird" at the end of the cable until it was free of the plane's magnetic field.

In the rear compartment Photographer's Mate Larry M. Rizzolla of Yonkers, N. Y., crouches amid his cluster of giant mapping cameras.

The others aboard are Aviation Radioman 1/c William R. Wegener of 61-42 Madison Street, Queens, N. Y., and the plane commander, Marine Maj. Robert R. Weir of Philadelphia, who piloted one of the two planes on the polar flight made by Rear Admiral Richard E. Byrd on Feb. 14.

Instrument Shows Formations

The surface of the icecaps becomes more disturbed as we move toward the Alexandra Mountains and begins to look like a white version of the Badlands. With the sun close to the horizon, shadows mark the slopes and crevasses.

Suddenly peaks begin to appear. Looking back we can see that the leeward sides are cliffs of snow-free rock. The highest peak is Mount La Gorce. It was one of Admiral Byrd's first discoveries; flying at about 6,000 feet, we easily clear it. On its west slope wind lifts snow in small whirlwinds. A strange pattern of snowdrifts runs miles to leeward.

Dr. Balsley runs from his instruments to a window and back. Geologists of the previous Byrd expeditions deduced that this was a sedimentary formation. The writing needle of the magnetometer inscribes a smooth line on the paper, indicating that the geologists were right.

Ahead a dark overcast obstructs the route over Sulzberger Bay, so we head back toward Little America across the Rockefeller Mountains. Over these the needle draws sharp changes in magnetism with a pattern characteristic of volcanic rock. This had been the evidence of specimens obtained during Admiral Byrd's 1934-35 expedition.

Near Mount Franklin we see tracks in the snow where the mechanized trail party under Capt. Vernon Boyd reversed its course.

Before landing we have orders to circle Roosevelt Island, known to lie under the flowing ice that divides to form the Bay of Whales. No man has ever seen this island, But from the magnetic graph made as the plane crisscrosses above it, Dr. Balsley says he is sure it is volcanic, apparently rising abruptly from deep water.

The magnetometer was developed during the war as an airborne and shipborne submarine detector. The Soviet Union is the only other country known to have developed similar equipment, according to technicians here.

BYRD HEADS NORTH ON AN ICEBREAKER

Little America Tents Stand, With Flag Left Flying, as the Burton Island Sails

By WALTER SULLIVAN

LITTLE AMERICA, Feb. 23—Exploration from this base is over for this year. Late yesterday the camp began packing to go home.

A Douglas transport on the last long-range hop from here came in and landed with one engine early in the afternoon. As soon as this plane and a companion craft that had been sent out to escort the cripple, had landed, Rear Admiral Richard E. Byrd gave the order to freeze the planes to the icecap.

The Navy icebreaker Burton Island arrived at 5 A. M. yesterday, welcomed by the 197 men in this tent city.

When she sails, possibly this evening, for the north, the nine planes, including the six twin-engined Douglases, will be left sitting on the Ross Shelf airstrip. The transports, all veterans of various war service, have served their flight crews well, carrying them on perilous exploration hops that fanned out from here, reached beyond the South Pole and brought the crews back unharmed.

It will be crowded on the Burton Island during the trip out. The enlisted men will take turns sleeping in the bunks, but the 385 men aboard the icebreaker will not mind. They will be bound first for Wellington, N. Z., for six days of well-earned liberty.

Outside the Ross Sea icepack, many of the men will transfer to the flagship Mount Olympus, which is waiting in the vicinity of Scott Island.

Rear Admiral Richard H. Cruzen, the operations commander, aboard the Burton Island on the trip east from McMurdo Sound, found the Ross Sea frozen over west of Discovery Inlet. This may delay the trip through the pack.

All hands are preparing the camp for evacuation. Troughs are dug in the snow in front of each plane and into these the landing skis are frozen. Likewise wingtips are anchored to buried logs. It is expected the planes will still be flyable if a new expedition returns within the next few years.

The rows of tents will be left just as they are. Supply dumps are being marked with metal poles topped by metal signs saying, "100-octane gas," "fuel wagon," and the like.

Soon only the radio masts and flagpole will still show above the snow. So diagrams are being prepared, to be posted on the masts, giving all locations in the camp in relation to these poles and inventories of supplies. Also to be posted will be proclamations stating that all facilities here are United States Government property.

An emergency base had been built around Little America III, ready to accommodate thirty-five men during the long winter night; but since no planes are down and no one is stranded out in the snowy wastes, it will be left as it is.

The Voice of Little America radio station, NLA, has signed off. The field kitchen in the mess tent is now cooking what is scheduled to be the last meal here.

BYRD PLANE CIRCLES ANTARCTIC VOLCANO

Combined United States Press Dispatch

LITTLE AMERICA, Feb. 18—A Navy exploration plane circled the vapor-shrouded cone of the Antarctic's only known active volcano, Mount Erebus, last night after a flight through the unknown "back yard" of the high mountain range that studs the western shore of the Ross Sea.

The plane was one of five that took off without jet assistance from the Little America IV snow-strip, which has hardened as the daily temperatures fall below minus 20 fahrenheit in the waning Antarctic summer.

The plane crossed the Queen Alexandra mountain range at a point sixty miles northwest of the Beardmore Glacier, turned north and flew a course fifty miles inland from the ice-covered Ross Sea coast, photographing the "back yard" between the mountains, some of which had been charted by land parties on shore, and the vast plateau of Victoria Land.

"One of the most amazing things we saw were several frozen-over lakes far inland, in valleys between mountains," said the pilot, Lieut. (j.g.) Erwin Spencer. "They were a beautiful deep green in color—little round lakes frozen over with what looked like clear ice. I could hardly believe my eyes when [Comdr. William M.] Hawkes nudged and pointed to those little green things down there in the middle of the frozen wilderness."

Flights Made West of Ross Sea

Combined United States Press Dispatch

LITTLE AMERICA, Feb. 22 (Delayed)—The two latest flights of the expedition's Douglas planes have filled in unexplored gaps along and inland from the mountain ranges that border the western shore of the Ross Sea. The flights, each of which lasted more than ten hours, photographed and mapped hundreds of new mountains and made many corrections to existing maps.

One plane, commanded by Lieut. (jg) William K. Martin of Springfield, Mo., flew down the center of the Victoria Land range about 300 miles from south to north. The crew saw many mountaintops colored reddish brown and said some were conical in shape, like volcanos.

The other plane, commanded by Comdr. William M. Hawkes of Jersey City, N. J., crossed the mountains a short distance north of Cape Kerr and south of Moore Bay, then flew north beyond the Prince Albert mountains. The crew sighted some hematite-colored mountains, indicating the possible presence of iron ore. Co-pilot Herbert Salyer described a huge glacier that "spilled over a mountain cliff and hung straight downward like a tremendous frozen waterfall."

Navy Men Visit Scott's 1912 Camp Where British Polar Explorer Died

By the United Press.

ABOARD THE USS MOUNT OLYMPUS, Feb. 18—(Delayed).—The ice breaker Burton Island steamed into McMurdo Sound early today to begin surveying operations virtually in the shadow of Mount Erebus—the Antarctic's only live volcano.

ABOARD MOUNT OLYMPUS, Feb. 20—The forty-five-year-old camp of Capt. Robert Scott, England's premier polar explorer, was inspected today by a surveying party of the United States Navy Antarctic expedition.

On a snow-swept barrier near McMurdo Sound on the west side of the Ross Sea, the Americans paid tribute to Britain's sea dead before the monument that Scott had erected before he perished in March, 1912, from starvation on a trek back to his base from the South Pole. Scott had reached the Pole on Jan. 18, 1912.

The American party led by Rear Admiral Richard H. Cruzen, aboard the ice breaker Burton Island, saw remains of Scott's first polar encampments and equipment, some of which was still usable. The encampment site was still visible, although it was covered with snow and ice formations.

Navy correspondent John Lee reported that two separate reconnaissance trips were made into the McMurdo area, one by plane and one by a special shore-landing party.

Scott's first camp site at Hut Point was located by Admiral Cruzen in a helicopter and later a "beachhead" was established on Cape Armitage. From Armitage a fifteen-man party slogged over the snow to the bivouac of Scott's expedition.

Boxes marked "National Antarctic Expedition" were uncovered at Scott's camp site. A number of tins of biscuits and frozen mutton carcasses were also found.

The buildings that housed members of the Scott expedition were found intact but sealed. No attempt was made to enter.

Cape Armitage was disclosed to be almost entirely made up of lava formations, punctuated by rugged peaks, which almost certainly were formed from hot liquid subterraneous outpourings.

By Alton L. Blakeslee

For the combined American press

ABOARD U. S. S. MOUNT OLYMPUS, Feb. 27 (AP).—A copper tube, corroded green from thirty years of exposure to the polar elements, has yielded a tribute written in memory of three Britons who perished on Sir Ernest Shackleton's Antarctic expedition of 1914-'17.

The tube, containing a message in ink, was found last week at a McMurdo Sound site by Rear Admiral Richard H. Cruzen, who brought it back with him. The lines were penned to the memory of two members of the expedition—Macintosh and Hayward—who were lost when ice broke up while they were making a trip between two capes, and the Rev. Spencer-Smith, who died on a trial trip.

Admiral Cruzen found the tube near a camp site used by another explorer, Captain Robert F. Scott, in 1910-'12. (Scott perished while returning from a sled trip to the South Pole.) But the Scott camp was eight miles south of the later Shackleton camp, and Admiral Cruzen said it was a mystery how the tube happened to be lying on the snow near the Scott camp.

The unsigned message said:

"Sacred to the memory, 1914-1917, of Lieutenant Aeneas Lionel A. Macintosh, R. N. R., V. G. Hayward, the Rev. A. P. Spencer-Smith, B. A., who perished in the service of the expedition.

"Things done for gain are naught,
"But great things done endure.

"I ever was a fighter, so one fight more,
"The best and the last.
"I should hate that death bandaged
"My eyes and bid me creep past.

"Let me pay in a minute life's full
"Arrears of pain, darkness and cold."

The three tributes appear to be quotations from Robert Browning, somewhat paraphrased.

ABOARD THE ICEBREAKER BURTON ISLAND, in Ross Sea, Feb. 24—At a shouted command from the bridge last night, two young seamen hauled out the big wooden pins that held the mooring lines of this ship to the Bay of Whales ice shelf and raced to the gangway. The entire population of Little America, human and canine, then sailed out of the bay and northwestward toward the ice pack and New Zealand.

A few impatient blasts of the icebreaker's whistle had brought a weasel scooting across the ice with the last handful of the 197 men. The amphibious vehicle was hoisted aboard by a crane and stowed near a jeep and the radar and other special equipment. Everything else, including the other tracked vehicles, was left behind.

This sturdy ship, with Rear Admiral Richard E. Byrd and his base personnel of the Navy Antarctic expedition aboard, got under way at 11:26 P. M. The Burton Island's engines were soon turning over for a ten-knot speed through twelve-inch ice.

WELLINGTON, N. Z., March 7 (AP).—Three thousand men of the United States Navy's Antartic expedition, now homeward bound, had their first taste of civilization in there months today when three ships put in at Wellington.

The central task force of the navy's antarctic expedition left Wellington for home March 14

Nimitz *Cruzen* *Byrd* *Forrestal*

'Well Done' From Forrestal Greets Adms. Byrd, Cruzen

WASHINGTON, April 14.—The U. S. S. Olympus, flagship of the Navy's Antarctica expedition, docked at the Naval Gun Factory today and was greeted by about 500 persons, including Secretary of Navy Forrestal and Admiral Chester W. Nimitz, chief of naval operations.

First down the gangplank of the flag-decked ship, amid flashing of photographers' lights, were Rear Admirals Richard E. Byrd and Richard H. Cruzen, leaders of the four-and-a-half-month exploration of South Polar regions.

Later, at a press conference on board ship, Admiral Byrd told reporters that he has never asked the State Department to make territorial claims based on any of his expeditions and that he was undecided as to whether he would do so in connection with this last trip.

Asked if the Antarctic was of strategic importance, he said that it was not.

Admiral Byrd and Admiral Cruzen, task force commander, were congratulated with a "job well done" by Mr. Forrestal directly after they were piped ashore at 10 a.m. Admiral Nimitz followed with his congratulations.

The crowd of 500 included mostly women and a few children. Almost all of them, apparently, were relatives of crew members.

A Navy band was playing and a company of Marines and another of bluejackets were standing at attention as the guard of honor when the Mount Olympus was made fast.

Admiral Byrd was met by Mrs. Byrd and their two daughters, Catherine and Bolling Byrd. He also was greeted by Senator and Mrs. Harry Flood Byrd, his brother and sister-in-law. The admiral's mother was not well enough to make the trip from Winchester, Va., to meet her son.

Byrd gave out this report of the accomplishments of the expedition based on figures just compiled:

A total of 1,700,000 square miles of Antarctica investigated—about 900,000 of them heretofore unknown.

Some 5400 miles of coast-line charted—1400 miles of it new and 3000 miles previously erroneously mapped.

Seventy thousand aerial photographs taken.

Twenty-two mountain ranges discovered which never before had been seen. Two had peaks over 20,000 feet high.

Twenty-six islands discovered, three or four found under the ice by means of instruments developed in war-time to detect submarines.

The "biggest glacier in the world" and some 19 others.

Nine new bays and five capes.

Byrd Sees Ronne's Success

Rear Admiral Richard E. Byrd predicts success for the forthcoming second American expedition to Antarctica's Marguerite Bay area, below South America.

Talking to newspaper men, Admiral Byrd praised Comdr. Finn Ronne, who is leading the expedition, as "a man of extraordinary ability." He accompanied Admiral Byrd to Antarctica previously.

Admiral Byrd stressed that Commander Ronne was going to an area which he and Admiral Cruzen styled Antarctica's "hell hole."

It is a place where cold, heavy air sweeps down the steep glaciers from the high plateau, meets the warmer ocean air and creates gales. The Byrd 1940-41 expedition had its east base at Marguerite Bay, and a British party has been in the area since 1943.

Antarctic Is Becoming Warmer, Study of Aerial Photos Indicates

By WALTER SULLIVAN

ABOARD MOUNT OLYMPUS, Panama, April 4—Study of aerial photographs aboard the homewardbound ships of the Navy's Antarctic task force has indicated that retreat of the Antarctic ice-cap is far more advanced than had previously been believed.

Early in the century geologists under Scott and Shackleton discovered receding glaciers on the edge of McMurdo Sound and found a curious valley there that was rocky and barren in the midst of a world of ice and snow.

Analysis of this expedition's recent mapping pictures by geologists indicates that such valleys and plateaus are scattered far and wide over Antarctica, from Victoria Land to the Ingrid Christensen and Knox Coasts, where two oases spattered with lakes and mounds were found.

Some of the pictures show that water erosion has begun to soften the rugged landscape in these valleys, which previously had been scarred and gouged by flowing ice. So far as is known, such erosion has never before been seen so far south.

The belief that the Antarctic is gradually becoming warmer has been greatly strengthened, the geologists believe. They point out that, by comparison of this year's aerial photos of the McMurdo Sound region with the careful sketches made by Scott's men forty-five years ago, it may be possible to estimate the speed of the icecap recession.

The former belief that the temperature never rises above freezing in that part of the world has been disproved, but no sign of vegetation is observable. Fossil remains found there have indicated that at one time before the ice age the Antarctic continent was warm and verdant. The current recession of its ice is associated with the shrinking of glaciers all over the world, indicating that the earth is still warming up from the last ice age.

Seventy thousand aerial photographs were taken from the Navy's exploratory planes and an initial study of them is being made as the ships near home ports. This figure is exclusive of motion pictures.

Planes from the seaplane tender Currituck took 40,000 shots. Planes of the frequently fog-bound Pine Island got only 9,000. The remaining 21,000 were taken by planes from Little America and are now being worked over aboard this ship, where advantage can be taken of the presence of the flight crews before they scatter to their homes on leave.

The photographs from the automatic mapping cameras are printed on continuous rolls. As these are cranked through a viewer the pilots relive the thrills of sighting new and otherwise inaccessible regions. Each can see fierce landscapes that remind him of somewhere near home — the buttes and mesas of the West, the Grand Canyon, table lands, trap rock palisades.

Expedition to Antarctic Triumph for Navy Radio

ABOARD THE MT. OLYMPUS IN THE ANTARCTIC, March 1 (AP).—Navy communications chalked up, a new achievement during the Antarctic expedition by keeping in almost constant radio contact with Washington, 9,200 miles away.

In the first twelve weeks, the communications department of this flagship handled 16,000 messages, including official dispatches, 400 word news stories and private messages, topped by one marriage proposal to which the girl said "maybe." The principal achievement was the maintenance of twenty-four-hour communications with the Washington radio, with only a few interruptions, said Lieutenant Commander Joseph S. Campbell, of Silver Springs, Md., task force communications officer.

Ninety per cent of the messages to Washington were carried by a sixty-word-a-minute radio teletype. The teletype requires an especially strong signal and, owing to ionospheric shifts, it is able to operate an average of only twelve to thirteen hours daily. The rest of the time contact was made for the most part by Morse code messages, some times relayed through Samoa, Honolulu or Balboa, C. Z.

Reporters on the trip are: Alton Blakeslee, Associated Press; H. D. Quigg, United Press; Lee Van Atta, International News Service and American Broadcasting Company; Roy Gibbons, *Chicago Tribune* service and Mutual Broadcasting System; Walter Sullivan, New York Times service; Robert Nichols, New York Herald Tribune service; Fred Sparks, *Chicago Daily News* service, *Collier's* and *Look* magazines; Thomas H. Henry, *Washington Star*, *Saturday Evening Post*, and North American Newspaper Alliance; James G. Lucas, Scripps - Howard Newspapers.

POLAR SHIPS AT PANAMA

Navy Explorers Hail Each Other in Passage Through Canal

BALBOA, Canal Zone, April 3 (Delayed) (AP)—The Mt. Olympus, flagship of the Navy's homebound, Antarctic expedition, arrived today at Balboa for a three-day Easter visit.

ABOARD THE U. S. S. MOUNT OLYMPUS, April 7—Navy explorers bound for home from two sides of the Antarctic continent stood at attention and saluted each other across the waters of Gatun Lake today as their ships passed in opposite directions through the Panama Canal.

This ship headed for the Atlantic and Washington, where she is due a week from today. The seaplane tender Pine Island, on which planes of the East Group were based, was bound for the Pacific and San Diego, Calif. She will wait in Balboa for the West Group's tender, the Currituck, due Wednesday, to exchange planes and personnel. The Currituck will then go to Norfolk, Va.

RONNE EXPEDITION OFF FOR ANTARCTIC

Sails From Beaumont, Texas —Plane Damaged in Loading Had to Be Replaced

By MRS. FINN RONNE
North American Newspaper Alliance.

ABOARD THE PORT OF BEAUMONT, Tex., at Sea, Jan. 29—After months of planning and weeks of hectic last-minute work, the blue waters of the Gulf of Mixico now surround us. We need to make good time in our race against the Antarctic's winter ice, particularly after time lost during the past three days.

In the final days and hours before the ship actually got under way, all hands—from Comdr. Finn Ronne down to the two women—turned to securing the ship for rough weather ahead. Drums of aviation gasoline and lube oil were lashed firmly and the forty dogs aboard were chained topside in a sheltered location.

Physicist H. C. Peterson took every spare minute to set up his cosmic-ray telescope, while Lawrence D. Kelsey was continuously tuning his radio gear—the world's fastest sending equipment.

We have had to get a new plane —the first having been damaged in loading. So the two pilots the Army is sending along, Capt. James W. Lassiter and Lieut. Charles J. Adams, plus the expedition's aerial photographer, William Latady, have remained behind to fly the new Beechcraft to Panama, where they will join the expedition.

— —

BEAUMONT, Tex., Jan. 25 (AP).—The Finn Ronne Antarctic expedition sailed from Beaumont today for an eighteen-month scientific and research voyage to the polar regions far below the tip of South America.

The 183-foot vessel with its twenty-three-man crew departed four hours behind schedule.

$250,000 IN AAF SUPPLIES GOING TO ANTARCTIC

Washington, Jan. 15 (AP)—The army air forces reported today it is supplying the Finn Ronne Antarctic expedition with $250,000 worth of equipment, including three light airplanes. The AAF expects to receive information on how the material stands up during the bitter cold of the next Antarctic winter, thru which the expedition plans to stay frozen in polar seas. New maps and scientific data also will be brought back.

The material includes, in addition to the planes, photografic, rescue and survival equipment, polar clothing, tents, skis, mountain climbing equipment, sleds, and a new type of emergency ration.

State Department Gives Ronne Explorers Go-Ahead

The State Department indicated Jan. 25 that it was giving its blessing and protection to the Ronne Antarctic Expedition, the second American group to head for the South Pole in less than two months.

Although the expedition is privately sponsored, Undersecretary of State Dean Acheson announced in a letter that the department was approving it in the expectation that the mission will be a real value and asserted that Ronne, as a matter of course, "will be entitled to receive all appropriate aid and protection from the Department of State."

The indorsement was regarded as particularly significant since Ronne is planning to set up a base in an area already occupied by a British party. The department heretofore has steered clear of coming into conflict with the British in the Antarctic.

In an exchange of letters with Representative Combs, Democrat, of Texas, Mr. Acheson said the department already had made inquiry of the British government regarding the property and supplies left at the Marguerite Bay site by the United States Antarctic Service Expedition, headed by Admiral Byrd in 1941.

The British, at the Byrd site the last two years, reportedly had been using some of the Byrd equipment.

Later, in an apparent move to discourage further American expeditions to the area, the British party requested that the remaining American property be removed to the United States.

Representative Combs had written to Acheson asking the support of the Government in the Ronne undertaking. He pointed out that by act of Congress, Comdr. Ronne was authorized to use a Navy vessel for the expedition and deserved the backing of the State Department since he was serving "the interests of this country."

Mr. Acheson, without referring to the British request, agreed that department aid and protection will be extended to Comdr. Ronne "as an American citizen engaged in a lawful venture in the interest of his countrymen."

"Comdr Ronne's project is, I am sure," he said, "a most laudable one and the department shares wholeheartedly your expectation that his expedition will be of real value in promoting scientific knowledge of the Antarctic and of the largely unknown conditions existing on that continent."

Admitting that "several countries" had made advanced claims to Marguerite Bay, Mr. Acheson told Representative Combs that the United States had not recognized any of these claims and was still reserving its rights in that area.

Twenty-one Scientists Going.

"Since the expedition is under the able guidance of so experienced a leader as Comdr. Finn Ronne, it is not anticipated that any insurmountable difficulties for the expedition will arise," Mr. Acheson said.

"Should the occasion arise, however," he added, significantly, "the Department of State as well as all tne other interested branches of the Government will be happy to assist him."

Twenty-one scientists, including geologists, mineralogists and meteorologists, will accompany Comdr. Ronne on the 10,000-mile trek to the Marguerite Bay Peninsula.

(Distributed by the North American Newspaper Alliance.)

Mrs. Finn Ronne and Wife Of Flier Go to Antarctic

North American Newspaper Alliance.

ABOARD SHIP PORT OF BEAUMONT, at Sea, Feb. 28—Mrs. Finn Ronne, wife of the Antarctic explorer, is accompanying her husband on this American expedition. By a decision taken when the party was at Valparaiso, Chile, Mrs. Harry Darlington, wife of the expedition's chief pilot, also is along.

The two will be the first women, so far as is known, to land on the Antarctic continent, although Norwegian women have flown over the Antarctic.

Commander Ronne said today that Mrs. Ronne would serve as assistant scientist and recorder. She was "very much needed in this capacity because of her complete knowledge of the background of the expedition," he added.

The vessel, Port of Beaumont, Texas, carrying members of the Finn Ronne Antarctic expedition, sailing from Beaumont for an eighteen-month scientific and research voyage.

U.S., BRITISH AT ODDS ON ANTARCTIC FLAGS

By COMDR. FINN RONNE

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STONINGTON ISLAND, Marguerite Bay, March 17 (Delayed)—The hitherto academic issue of territorial rights in the Antarctic has materialized here in a dispute over raising the United States flag over this base, less than 200 yards from a long-established British base camp.

On March 13, at 3:30 P. M., the Stars and Stripes was raised by me on the flagpole erected by the United States Antarctic Service Expedition (of which I was a member) in 1939, when this base was established.

Next day I received the following letter from the commander of the British base, Maj. K. S. Pierce-Butler:

To Comdr. Finn Ronne, USNR,
U. S. S. Spirit of Beaumont.
Sir:

I am directed by His Majesty's Government to inquire the reason for the United States' flag being flown on the northwest point of Stonington Island.

I assume that the United States Government has made no claim to this territory and that the flying of this flag is merely an indication of the presence of a United States expedition.

If that is so, I have no objection to the raising. If, however, this flag is intended to represent a territorial claim, I am bound to protest on behalf of His Majesty's Government, as this violates British sovereignty and I shall have to report the matter to His Majesty's Government for instructions.

K. S. PIERCE-BUTLER.
Major, Royal Signals,
Magistrate, Marguerite Bay.

Though Major Pierce-Butler signed as magistrate, indicating that a law court had been established here, I saw none such on an earlier visit to the British base.

The Letter in Reply

I replied to Major Pierce-Butler as follows:

To Major K. S. Pierce-Butler,
Sir:

I am in receipt of your letter inquiring as to why the United States flag is being flown on the American-built flagpole on Stonington Island.

The Ronne Antarctic Research Expedition is now reoccupying the base built by the United States Government on the United States Antarctic Service Expedition, 1939-1941. The flagpole was built by this expedition as part of the United States Government's camp.

As an American expedition reoccupying this base on Stonington Island, we have reflown the American flag on the American-built flagpole at the American camp.

FINN RONNE,
Commander, USNR,
Expedition Leader.

Unless I am otherwise instructed, the American flag, now raised, will continue to fly over our camp site. I have told Major Pierce-Butler that this is not a personal issue and that we certainly have no objections to their building their own flagpole just as high or higher. The British flag now is flying on their buildings.

I have also informed the Major that as I understand it, the United States Government does not recognize any other Government's claim to territory in the Antarctic, nor do we make any claims.

U. S. Base in Antarctic Sacked And Damaged, Ronne Reports

By Comdr. Finn Ronne

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RONNE ANTARCTIC RESEARCH EXPEDITION, MAIN BASE, "Port of Beaumont," Mar. 19.—The buildings and supplies left here by the United States Antarctic Service Expedition when it withdrew in 1941 have been sacked, looted and needlessly damaged. It is difficult to establish precisely who were the culprits, since Argentine and Chilean expeditions have called here and a British group has been here for over a year.

Immediately upon landing here, March 12, we visited the three large and two small American buildings, in company with Maj. K. S. Pierce-Butler, commander of the British base, and found that an estimated 80 per cent of the valuable material left here had been taken or rendered inusable; the entire place was littered with rubbish.

Greetings to Visitors.

On one wall of the science building was written the following message in large letters:

"To the first visitors, greetings: "The materials abandoned in this base are the property of the United States Government or of individual expedition members. Please report to the United States Department of the Interior any articles used. If possible to remove part of the valuable items, the above agency should be notified and instructions will be given for shipment to Washington, D. C., U. S. A.

"Good luck!

"Signed
"RICHARD B. BLACK, East Base,
"Antarctic Service Expedition,
"March 22, 1941."

Here are some examples of what we found:

The drawers of one very complete cabinet of excellent surgical instruments had been thrown to the seven winds and only two needles and part of one bone instrument were left.

Valuable books of Cook's explorations, lent to the earlier expedition by the Library of Congress, and others are missing and many volumes of the Harvard Classics were thrown all over the room, mouldy and ruined.

Instruments Torn Out.

In the radio shack, every instrument had been pulled from its place and, except for what was stolen, all wiring and tubes had been torn out, broken and littered about the floor.

The machine shop had been wrecked and all movable tools taken.

The photographic room had been torn apart, sensitized paper and film pulled out of boxes and strewn around and much of it stolen.

The galley was littered with cooking utensils, but everything of value had been taken, including an electric mixer.

Some of the buildings had been partly dismantled—canvas coverings had been removed.

Antenna Poles Removed.

Radio antenna poles which made up a rhombic antenna system beamed on the United States and the west base station on the Ross Ice Shelf to the west of her had been removed.

The living quarters had been smashed and all but one of the boxes of personal gear left by the earlier expedition members had been stolen or broken into.

Much of the aviation gasoline has gone, though Diesel oil and coal supplies have not been touched.

The expedition photographer has taken pictures of the destruction and littered condition of the American base, which we will submit later. The nearly derelict state of the buildings will delay our occupation of them for at least 30 days.

200 Come Ashore.

On our arrival here, Maj. Butler told us that one Argentine and two Chilean ships had visited the island this summer; that one of the Chilean vessels, the Angamous, had been here just four days before we arrived. From this ship, he said, 200 men had come ashore and ransacked the buildings, also all the American material the British had packed for return to the United States aboard their ship, the Trepassy, this year. Certainly, British-labeled cartons and boxes were everywhere in the rubble.

Maj. Butler added that it had been impossible for his 10 men to prevent this.

The British group has submitted a list of the American equipment and goods which they have used or consumed. At my request, the British have started returning to us a great amount of equipment, photographic materials, machine tools and carpentry tools, galley utensils, scientific instruments, building materials, etc.

Maj. Butler has also promised that additional supplies would be returned to us from the stores on board the Trepassy when she called here in two or three weeks.

Maj. Butler said that we might inspect his camp at any time, tell him what equipment was ours and he would see we got it back.

In addition to all this, however, much United States Government property is unusable or has been stolen—and the popularity of this part of the Antarctic this past summer makes it almost impossible to establish guilt.

In 1943, two years after we left, the Argentine gunboat Primeiro de Mayo visited the base and claims it was at our camp for two and a half hours.

In a note to the United States State Department in September, 1946, the British for the first time indicated that they were and had been on Stonington Island. There is some confusion about how long the British have been here. Lord Inverchapel, British Ambassador in Washington, implied to me that they had been since 1944.

Post Office Approved For Ronne Expedition

By Steffan Andrews

North American Newspaper Alliance

The United States has authorized Comdr. Finn Ronne, leader of a private expedition to the Antarctic, to establish a post office at his base in Palmer Land.

The move was revealed following a State Department announcement that Comdr. Ronne, a naval reserve officer, had been given full permission to raise the American flag on what was formerly Admiral Byrd's base in Palmer Land, despite objections of a British expedition in the area.

Jesse M. Donaldson, first assistant postmaster general, acknowledged that Comdr. Ronne had been commissioned a postmaster, fourth class, shortly before his departure for the Antarctic, but declined to state the purpose of the commissioning.

While State Department officials also refused to comment, a spokesman pointed out that the British embassy had been advised that Comdr. Ronne's flag raising at the former United States base did not constitute an American claim to the territory.

He indicated that the same rule applied to the establishment of any post office. The Department has repeatedly stated that the United States has never formally asserted claims to any part of the Antarctic and does not recognize those filed by Great Britain or any other nation, the spokesman said.

Colonial Office Denies Britons Damaged Base

LONDON, Mar. 19 (NANA).—The British Colonial Office, which is responsible for the Falkland Island dependencies survey, the British exploratory group now established in the Antarctic, yesterday flatly denied the possibility that Britons were responsible for the looting of the American base camp on Stonington Island, Marguerite Bay, abandoned by the United States Antarctic Service expedition in 1941.

[At Santiago, Chile, Defense Minister Manuel Bulnes denied that the American base was robbed by the current Chilean Antarctic expedition, The Associated Press reported. Replying to London news reports, Mr. Bulnes said the expedition's commander had reported seeing "Englishmen in Margarita (Marguerite) Bay" using articles from the American base. At London, a Foreign Office spokesman said the British believed crews of Chilean vessels raided the base on Feb. 20 and March 8 of this year.]

Ronne's Ship at Valparaiso

VALPARAISO, Chile, Feb. 22 (AP)—United States Comdr. Finn Ronne's ship Port of Beaumont took aboard fuel and provisions here today in preparation for the party's year and a half of exploration and scientific research in the Antarctic. The ship arrived here last night.

Ronne Unloads Ship, Airplane

BY COMDR. FINNE RONNE

RONNE ANTARCTIC RESEARCH EXPEDITION, Stonington Island, Palmer Land, March 18 [By wireless]—We are beginning to unload our ship and get our airplanes ashore, in preparation for pushing southward and laying an operations base before the winter closes in.

One small plane was loaded on a boat platform and taken ashore so that Chief Pilot Harry Darlington can fly to the south and see whether we can push the ship thru the ice to King George VI. sound. If so, we will unload there, near our advanced base, which would save transporting material overland.

The winch and boom is being used to hoist the heavy equipment over the side of a platform built on a motorboat we brought with us and another boat which was left here from the last expedition. The dogs were taken ashore the day after our arrival on March 12. They are fed seal meat which they like and which is the best food for them. The dogs did not do so well on the way down, and we lost some of them, and so far there have been no pups.

The trip down, after a few rough days, was pleasant. The ice was much lighter this year than in 1941 when we were forced to evacuate the base, and when no vessel could come nearer than eighty miles to the base. We did not meet the ice until early March 12, the day of our arrival. There were several large bergs on the way to King George VI sound, but as Marguerite bay seemed fairly clear we pushed directly in there through some light pack ice and past a number of huge white and blue icebergs. Capt. Isaac Schlossbach managed to anchor in the bay off Stonington island quite close to shore We gave a sigh of relief at our good fortune.

The base on the island is in a beautiful location, the island itself is nothing but a rockpile, but it is surrounded by snow-covered mountains, some 4000 feet high. Behind our buildings is the foot of a glacier which leads up to a plateau 6500 feet high, over which our trail parties will travel to the south., The evening sunset colors on the mountain snow are beautiful beyond words, a rare threat which few persons have had the privilege of seeing.

The members of the expedition have been divided into two groups one will clean up the camp and repair it, and the other will unload the ship. Already gas drums have been pulled to the beach and a lot of other heavy equipment has been taken ashore.

Our base consists of one large house with a mess hall; one good-sized science building containing radio and photographic rooms, a library, meteorological observatory, and space for geological and biological work as well as geographical plotting tables; one fair-sized machine shop; a small shack which has always been my living quarter; a blubber house for cutting seals; and a small storehouse. The icebox cache is only about fifty feet away, cut into the glacier.

Our brief observations of the British operations indicate that their main interest is meteorology. At the present time they have four men with two dog teams surveying in a northerly direction on the peninsula, which they call Graham land. They have one small plane which has apparently not been operated as yet.

Antarctic Survey by Ronne Fliers Speeds Base on George VI Sound

By COMDR. FINN RONNE

North American Newspaper Alliance.

STONINGTON ISLAND, Palmer Land, Antartica, March 21 (delayed)—In the best flying weather that the Antarctic can offer, Capt. Harry Darlington, pilot, and Bill Latady, photographer, made a flight today to the entry of King George VI Sound. [The region is the western side of the base of the Palmer Peninsula at about Long. 70 W., Lat. 70 S.]

The temperature was around 25 degrees and a short warming up of the engine was necessary. Then, with a few hundred yards' takeoff, the pane soared over our camp on its way to the open passes leading southward.

Photographs were taken during the flight and, on the ship's radio, expedition members were able to follow the hop. Not only was much open water reported to the south, but the plane also passed a multitude of icebergs just recently broken off from shelf ice. Captain Darlington estimated some of them to be many miles in length, and they would have offered good landing fields in an emergency.

The plane carried full equipment, including trail gear, radio, skis, sleds and provisions for thirty days.

At the entrance to the Sound the fliers found that the ice contours had changed since previous aerial photographs were taken during the United States Antarctic Service Expedition of 1939-41. More ice had gone out from the Sound itself and what formerly was shelf ice 165 feet in height was now a bay filled with pack ice, with hundreds of seals sunning themselves on the floes.

At the eastern side of the Sound, Latady spotted what later showed up on the photographs as a well-protected low ice shelf, suitable for mooring and unloading the expedition's ship. Darlington and Latady cruised over the place and studied the approaches to the elevated hinterland, over which snowmobiles would have to travel to reach the site for the operational base at the end of King George VI Sound. On their return journey they encountered headwinds that delayed their arrival at the base for an hour.

As a result of their findings it was decided to leave this base at daybreak for the entrance to King George VI Sound to deposit gasoline, food and snowmobiles intended for use at the operational base with the advent of the Antarctic spring in August. This move will greatly facilitate the advanced field program.

All hands are working tonight to make the ship ready for sea. We are leaving a few men to man this base until our return.

Ronne Ship Sets Record

MARGUERITE BAY, Antarctica, April 4 (Delayed)—The Port of Beaumont sailed farther south into the completely uncharted waters of Marguerite Bay than any ship in history and, in so doing, discovered many new islands and charted them on existing maps.

We reached 69 minutes, 18 degrees south Latitude and, so far as I know, no ship has ever been farther south in this sector of the Antarctic than approximately 68 degrees, 35 minutes. That was the North Star of the United States Antarctic Expedition, which made the deepest previous penetration in 1940.

Deep inside Marguerite Bay we discovered four large islands, each of them ice-capped, and rising approximately 100 feet from the water.

The large islands extended for varying lengths. ranging from one-half mile to nearly two miles. Numerous smaller islands were completely barren and rock was exposed for their whole length.

We could not go into King George VI Sound because huge icebergs near the entrance might have joined together and prevented our exit.

ICE CLIFF MENACES POLAR EXPEDITION

By COMDR. FINN RONNE

North American Newspaper Alliance.

RONNE ANTARCTIC RESEARCH EXPEDITION BASE, Antarctica, April 1—For the past two weeks we have been unloading the M/V Port of Beaumont as she lay out at anchor in Marguerite Bay. Our small boats have been ferrying supplies ashore, past a huge overhanging cliff of ice that juts out from a glacier moving into the sea.

Since this steep ice shelf is only 500 feet from our camp site and towers 100 feet in the air, our boat crews have kept a nervous ear cocked for sounds of its imminent collapse. Fairly constant creakings and groanings within the mass did not seem to change its stability, so the crews kept on working near it, though admittedly pushing their throttle a bit hard when they got very close.

But ou. first crew out this morning noticed that the crevasse between the glacier and what will some day be an iceberg had widened dangerously. Unloading operations were canceled.

A detail decided to blast in an attempt to remove the menacing ice mass. It lowered eight charges of TNT into the depths of the crevasse and connected wires to the impulse box. The cliff is still there.

BRITISH SHIP BURNS IN ANTARCTIC PORT

By Comdr. FINN RONNE, USNR.

North American Newspaper Alliance

PORT OF BEAUMONT, Palmer Land, April 2 (Delayed)—HMS Trespassy, one of two small British ships here to visit the Ronne Antarctic Research Expedition, caught fire last night as she lay at anchor and was severely damaged before the flames finally were put out this morning. Together with HMS Fitzroy, the Trespassy was carrying the Governor of the Falkland Islands and his party on a routine inspection of British bases in the Antarctic.

The skipper of the vessel, a Captain Burdon, was retiring last night when he smelled smoke coming into his cabin. Investigating he discovered that the heating boiler was burning. He organized and led the teams combatting the fire, and with his face covered he forced his way into the heaviest burning area.

The Trespassy managed to get her motor started and pulled alongside the Fitzroy to obtain additional equipment and help. Once during the battle the blaze seemed to be under control, but a few minutes later it started afresh.

Captain Burdon fought the fire until 5 A. M. when he was overcome by smoke.

A survey of the damage showed that with a few repairs to the wooden hull of the Trespassy she would be able to navigate back to Port Stanley, Falkland Islands, where a larger repair job would enable her to return to her home port in St. Johns, Nfld.

MARGUERITE BAY, Palmer Land, April 2 Delayed)—The Antarctic social season is at its peak. The cove on which this expedition has its base is as crowded, relatively, as New York Harbor, and landing boats are going back and forth carrying social notes and invitations to luncheons and cocktail parties.

This turn of events was brought about by the arrival of the British ships Fitzroy and Trepassy with Lieut. Col. Miles Clifford, Governor of the Falkland Islands.

Withan an hour after the two ships dropped anchor near the American ship Port of Beaumont, I received a note from Colonel Clifford inviting me to drop over for a chat. We discussed some of the mutually interesting problems arising from occupation of Stonington Island by both a British and an American expedition. From the deck of the Fitzroy we could see the Union Jack and the Stars and Stripes flying near each other.

Colonel Clifford stressed his desire for cooperation between the British and American parties, saying that both were "furthering scientific knowledge for the benefit of all mankind."

Both British ships left Marguerite Bay around noon, April 5, despite the increasing violence of the gale. Farewell hooter blasts were exchanged, almost swept out of hearing by the storm.

Ronne Antarctic Flight Takes Him Over Trail Once Covered on Skis

By Comdr. Finn Ronne
North American Newspaper Alliance

STONINGTON ISLAND, Marguerite Bay, Antarctica, April 12 (Delayed).—With Chief Pilot Harry Darlington I flew south today in our L-5 scouting plane over an old and familiar route. In 2½ hours we covered frozen Neny trough, a part of Neny glacier, an area that I once spent six days traversing with skis and dog team. That was on a long sledge journey south in 1941, when my dogs sank in up to their bellies in a foot of newly-fallen snow and narrowly missed death in crevasses running through a narrow glacier pass.

The remembrance of my earlier visit was brought back vividly by the sight of an area called the Hub, where a number of glaciers all come together to form an almost perfect pattern of the spokes in a wheel. The purpose of the flight was to determine the possibility of laying out a route to be used later by the tractor in establishing an operational base on King George VI Sound.

Perfect weather conditions prevailed. At 8,000 feet we headed for Neny glacier and cleared the high mountains by approximately 1,000 feet. We were provided with a scenic view of glaciers coming through narrow and wide passes in the mountains. Most of them were snow-covered and where the permanent ice cap meets the rocky formations blueish-green ice could be seen blending in with newly-fallen snow.

At two places I observed a very unusual phenomena. White smoke seemed to be rising from a nearly vertical cliff about 4,000 feet high. The sun beating down on the exposed rocks caused rapid evaporation of the snow. This water vapor, immediately after it left the relatively warm rock surface, condensed in the cold Antarctic air in whifts of white clouds. These whifts looked very brilliant with the sun shining through them.

RONNE PARTY ADDS TO ANTARCTIC DATA

Geophysical Recordings Made at Stonington Island Base With Special Apparatus

By COMDR. FINN RONNE, USNR
North American Newspaper Alliance.

STONINGTON ISLAND, Palmer Land, Antarctica, June 9—This expedition's geophysical research program, headed by Andrew Thompson, is making headway at the base here. The program involves long-term observations of tidal movements, terrestrial magnetism, seismology and seawater salinity. These observations must be correlated with others made at other times at other points before their full meaning is established.

The tidal apparatus was set up soon after our arrival. A hole large enough for the tidal float tube was melted through about eight feet of ice down to the average water line. The tube, braced in a small covering building, was settled through the hole to rest on the bottom of the cove, which is about four feet deep at this point.

The float in the tube connects with a registering instrument and the level of water is recorded hourly. Kerosene on top of the water in the tube prevents freezing.

A change of wind recently blew icebergs into the cove and this pressure broke the float. Mr. Thompson then enlarged the hole and inserted a strong outer tube made of the sides of gasoline drums to protect the apparatus.

Antarctic tidal studies have not been taken over a period long enough to serve the necessary purpose yet. Until tidal charts establish "sea level," it is not possible to estimate ocean depths or the height of mountains. Continuous observation over a year will provide a "fixed datum plane" from which the level of the ocean can be gauged at any date. Accumulated data will indicate any change in altitude of the land—for example, if an area should be subsiding.

Study of terrestrial magnetism is another important part of Mr. Thompson's program. To set up the necessary recording equipment, he first had to survey all Stonington Island to find the least magnetic spot; we then erected a small nonmagnetic structure to house the instruments.

The direct purpose of these surveys here is to develop the findings of the magnetic surveys in Central and South America carried out by the United States Coast and Geodetic Survey in 1941.

Mr. Thompson has installed his seismograph on solid rock in a hut that has to be kept at constant temperature by use of a conduit and blower fan. One earthquake has so far been recorded.

Final part of Mr. Thompson's program is his hydrographic work—a daily record of the salinity of the seawater here.

The water round the Antarctic Continent plays a very large part in the formation of deep water. As the winter ice freezes over Antarctic waters—particularly in the Weddell Coast area—this ice becomes free from salt. The water beneath, therefore, becomes more saline. Its high density and low temperature make it flow down the continental shelf to deep basins. These have been traced across the Equator in the Atlantic Ocean. Very little of this tracing has, however, been done in the Pacific Ocean.

The salinity of dense water is about 34 to 34.6 parts of salt to 1,000 grams of water. Here, last March 27, the reading showed density of water at freezing point as 1.0262; salinity about 33.2. The reading on May 7 showed a density of 1.0267 and salinity of 33.7, which indicates that the setting in of Antarctic winter has had an effect on the greater salinity of the water.

The temperature on the takeoff was about 20 degrees below freezing and the hardened snowy surface provided us with a fast runway.

Severe Quake of May 27 Recorded by Ronne Party

The Antarctic expedition headed by Comdr. Finn Ronne, U. S. N. R., May 31 asked THE NEW YORK TIMES by radio whether anyone else detected "a large earthquake" on May 27.

The expedition, at its base on Marguerite Bay, Palmer Land, had noted by seismograph an earthquake that was widely recorded on instruments in Australia, New York, Massachusetts and California.

The River View Observatory in Sydney, Australia, placed the disturbance off the north coast of western New Guinea and said t was the most severe quake recorded in recent years.

The Ronne expedition's instrument timed the first tremor at 2:17:49 A. M., Eastern Daylight Time. Fordham University here received the tremor at 2:18:09. The Rev. Joseph Lynch of the Fordham Observatory placed time of the shock under the sea off New Guinea at 1:59:12, E. D. T.

ANTARCTIC WINTER GRIPS RONNE BASE

Expedition at Marguerite Bay Carries on Preparations for Next Summer's Activities

By Comdr. FINN RONNE, USNR
North American Newspaper Alliance.

STONINGTON ISLAND, Marguerite Bay, Antarctica, May 1 (delayed)—We awoke this morning aboard the ship Port of Beaumont to see the initial freeze of the Antarctic winter beginning over the cove. Provided suitable weather conditions continue and there are no high winds, the ice should be strong enough to bear our weight in five days.

Previously, one of the two weasels made available to the expedition by the Army Air Forces was put over the side and floated ashore by Chief Engineer Hassage, thus enabling heavy hauling on land to be mechanized.

The base camp has been temporarily in charge of Chief Pilot Harry Darlington. He and the eight men with him in the camp have completely re-covered three large and three small buildings with canvas, made minor building repairs and alterations, stacked the coal for the winter, installed the generators for electric lighting and radio contact, cleaned out the buildings and made them livable and sorted equipment and moved it to the proper buildings.

Our dogs are undergoing an organized period of exercise and training. Trips with teams have been made up the galcier daily to haul aviation gasoline to the cache one mile up from the camp for future plane flights.

Four major reconnaissance flights have been successfully made in the L-5 with a view toward better planning of next summer's operations in the air and on the surface.

During the freeze-in, we will leave four men of our twenty-two personnel aboard the Port of Beaumont. These will come ashore as soon as the ship is fast in the ice.

Under the direction of the radio operator, Lawrence Kelsey, erection of rhombic antennas for the shore station will be concluded in a few days. This expanded radio link will be our contact with the outside world during the long winter months ahead.

RONNE EXPEDITION BASE, Marguerite Bay, Antarctica, May 3 (By Wireless) (Delayed) (Nana)—James Lassiter skied to shore here today from the M/V Port of Beaumont, Texas. The ship now is completely frozen in for the Antarctic winter.

Mr. Lassiter's undertaking was noteworthy for two other reasons: He won a bet as the first person to get from ship to shore on ice and he'd never skied before.

The speed with which the cove froze over, surrounding the vessel with a solid sheet of ice, was a surprise to all. At noon yesterday, she was swinging as usual in open water.

Changes In Antarctic Weather Surprise Ronne Meteorologist

BY HARRIES CLICHY PETERSON,
Ronne Expedition Meteorologist

STONINGTON ISLAND, MARGUERITE BAY, ANTARCTICA, May 7.—(BY WIRELESS)—(DELAYED)—I am surprised at the variability of weather conditions in the Antarctic. Winds are more frequent and good weather of shorter duration than any place with which I am familiar. Steady winds of 50 miles per hour continue for days, apparently on a weekly cycle, and always coming from a southeasterly direction.

Since one of the main objectives of our expedition is to gather scientific records and data for a full 12-month cycle, we began setting up our scientific apparatus as soon as we arrived on March 12. To aid me in my particular branch of science, the expedition set up a meteorological tower and a weather station. Twice daily I take observations with hydrogen balloon runs. These results are forwarded to the United States weather bureau in Washington, where they form a link in the complicated procedure of long-range weather forecasting.

Through the correlation of meteorological reports from a series of permanent weather stations established in both the antarctic and arctic, predictions could be greatly facilitated. The obvious economic and scientific advantages of such permanent stations lead many of us in meteorological science to urge their establishment.

RONNE AND BRITISH LINK EXPLORATIONS

Cooperative Plan in Antarctic Is Decided On by Leaders of Palmer Land Groups

By COMDR. FINN RONNE, USNR
North American Newspaper Alliance.

STONINGTON ISLAND, Palmer Land, Antarctica, June 19 (Delayed)—The British and American expeditions now in this area of Antarctica have decided to cooperate to the full in the geographical field. This was agreed today betweeen myself and Maj. K. S. Pierce-Butler, leader of Base E of the British Falkland Island Dependencies Survey, after weeks of detailed discussion and planning.

Historic Antarctic territorial disputes have not been considered in our discussions. We felt that problem was a matter for our respective Governments. We want to get the most done in the best way for all concerned, and detailed discussions of operational plans continue daily.

The over-all scheme of cooperation has been worked out: A member of the British group will accompany the Ronne expedition trail party, using American equipment and methods; a member of the Ronne group will go along with the British expedition's trail party under like conditions.

Both field parties will have air support by the planes of the Ronne expedition. The two parties will work in closest cooperation.

The eleven Britons at Base E and all personnel of the four other bases of the Falkland Island Dependencies Survey are on active duty with the British Army or Navy. Not military occupation units, they are carrying out an extensive geographical and scientific program. It is to be hoped that the United States Government may eventually undertake a similar program to open up and evaluate the economic, scientific and military advantages of this continent.

The large peninsula, south of the tip of South America, where our current activity is centered was one of the first parts of this continent to be sighted. The British claim they saw it first, and they call it Graham Land. The United States claims that an American whaling skipper, Nathaniel Palmer of Stonington, Conn., first sighted the area from the sloop Hero in 1820. We call it Palmer Land.

The British have long laid claim to a pie-shaped area of the Antarctic that includes Palmer Land and extends from the Falkland Island to the South Pole. It has been the policy of the United States not to make territorial claims in this continent and not to recognize the claims of any other nation.

Women Achieve Equality—in Antarctic

By COMDR. FINN RONNE, USNR

RONNE Expedition Base, Stonington Island, Antarctic, June 20—(By Wireless)—(Delayed)—The two women who are here with us—Mrs. Finn Ronne and Mrs. Harry Darlington—have been accepted so matter-of-factly as members of the expedition that they are frequently called by a man's name.

Though this is done through error and because it is difficult to tell a woman from a man when she is dressed in a parka and trousers, it indicates their complete acceptance here.

The simple requirements of living are so time-consuming, and so shared, that there is little time here for distinctions arising from sex. Mrs. Ronne and Mrs. Darlington both have to store firewood beside their stove every evening so that they can build a fire to melt frozen water for washing in the morning. They both have to worry about warmth and to avoid touching any cold metal surfaces for fear of burns.

These minor but typical problems of life in the Antarctic are cited because they indicate something which is important: life here is on a completely different standard than life in a temperate climate.

The normal basis for judgments do not apply, and a woman is not so much a woman here as another person—regardless of sex—who shares a common fight against the elements.

THE WOMEN have special tasks assigned to them, however. Mrs. Ronne is the expedition's recorder and Mrs. Darlington is the librarian. Both work on numerous other tasks as well. My wife, for instance, has gathered most of the news items which we send to the States, in addition to her main job of keeping a daily record of all the activities of this expedition.

Both the women are happy here and are glad that they were included. They take their turn at cooking with the other members of the party. The days slip by quickly and there are always varied tasks.

LIVING ARRANGEMENTS are very simple. The men sleep in a common bunkhouse. Leading off this, and reached through a narrow passageway, is a small shack where Mrs. Ronne and I live. The Darlingtons live in a small room in the bunkhouse proper, but it is partitioned off from the main area and is distinctly a separate room.

Though a woman shares such uncomfortable features of living as bathing in a washtub after heating pails of water, she has certain advantages here which she doesn't have Stateside. Clothes, for instance, are no problem at all. Style, fabric and fashion don't concern her a bit. And, except for a few creams brought along in quantity, cosmetics become a minor problem.

The food is good and wholesome, and twice a week we have ice cream and movies. There are occasional bridge games, there are many books to read and there are thousands of things to learn.

Moonlight ski trips are excellent sport and the absence of ski tows makes it particularly good exercise. The climate is exceedingly healthful and the women have shared in the general good health which the group has maintained.

Their life here is both happy and healthy.

WOMEN WITH RONNE—Above are shown, left, Mrs. Harry Darlington and right, Mrs. Finne Ronne, who are reported thriving in the antarctic with the Ronne Antarctic Research expedition.

Ronne Group Spends Long Antarctic Night Preparing for Trail

By Comdr. Finn Ronne
North American Newspaper Alliance

RONNE EXPEDITION BASE, Stonington Island, Antarctic, June 21 (Delayed).—The sun disappeared six weeks ago. There is approximately three hours of twilight each day, caused by the refraction of the sun's light on the mountains nearby. During the past three or four days the moon has been up all the time. Every other fortnight, the moon rises and sets twice in each 24 hours.

The temperature hovers between 15 and 22 below zero now, and we have experienced some high winds of late. During the last three days gusts have been hitting 80 miles per hour. We stay in camp and every one is working on preparations for the coming trail season. Our ship, the Port of Beaumont, Tex., has been frozen fast in the ice of Marguerite Bay for a month, and we are all living in the camp on Stonington Island.

Biggest Job Completed.

We have completed our biggest shore job—setting up the huge rhombic antennas. It was a long and difficult job. All hands worked at it, and shared a common disappointment when the two poles buckled before they were strengthened and supported. Slight damage and some delay resulted, but the poles are now firmly anchored to withstand winds of at least 85 miles per hour. The radio is working fine.

Geographer Dodson and Boy Scout Owen, both dog drivers, are working on harnesses, ganglines and the preparation of trail pemmican for dogs. Mr. Dodson is also conducting tests on sleeping bags and tents by having different men sleep outside in various types of equipment.

Second Mate McClary and Assistant Engineer Wood are busy lashing sleds. Chief Steward Gutenko is making up the trail rations for the men of the party. When completed the rations will weigh 70 pounds per man per month and will include pemmican, cocoa biscuits, oatmeal, lemon powder, butter, sugar, bacon, dried apricots, chocolate bars, iced tea and powdered coffee.

Planes Be Prepared.

Pilots Darlington, Lassiter and Adams, together with Aviation Mechanic Robertson, are working on the maintenance of our planes.

I am working on overall geographic and logistic problems for the trail parties. The most difficult part of this work is in co-ordinating surface parties with air flights, and figuring on weight allowances and timing for each. In addition, four separate plans must be made—one main plan and three alternates, which may be used if weather or mechanical conditions preclude the carrying out of the main plan.

So we are all busy in this long antarctic night, making plans for the coming daylight which will allow us to break free of our camp area and probe into the mysteries of the antarctic interior.

Chile, Argentina Reiterate Claims in Antarctic Area

SANTIAGO, Chile, Jan. 9 (Reuters)—With Comdr. Frederico Guezelaga, leader of the Chilean expedition to the Antarctic, on board, the frigate Iquique left Valparaiso on a southerly course today. The naval transport Angamos, with the rest of the expedition, will sail on Jan. 15.

SANTIAGO, Chile, Jan. 18 (Reuters)—Chilean naval authorities stated today that the frigate Iquique, forming part of the Chilean expedition to the Antarctic, has arrived at Orange Bay, 700 miles north of the Palmer Peninsula region of the Antarctic Continent, a distance that in good weather would take about forty-eight hours.

SANTIAGO, Chile, Jan. 21 (AP)—Foreign Minister Raul Juliet reasserted Chile's claim to the Antarctic in a Senate speech today that, he said, answered the United States' refusal to recognize the sovereignty of any nation over the southern polar region.

Dr. Juliet said the Chilean claim was based on those made by the Spanish conquistador, Pedro Devaldivia, and on decrees granting whaling concessions early this century.

SANTIAGO, Chile, Feb. 15—The Chilean Antarctic expedition has reached the South Polar continent and renewed this country's claim to a wide expanse of "national Antarctic territory," according to a dispatch received today.

The commander of the expedition's ship Angamos presided over a flag-raising ceremony "establishing sovereign rights," the dispatch said. The ship's cargo is being unloaded at a base.

SANTIAGO, Chile, Feb. 22 (U.P.)—The Chilean Navy's Antarctic expedition has established a base at the Bay of Discovery—now rechristened Sovereignty Bay—according to reports today from Commodore Alfredo Gueslaga, head of the expedition.

The bay is formed by the islands of Brabant and Antwerp, off the Graham Land coast on the western side of Palmer Peninsula. [The area, at about Long. 64 W., is north of Marguerite Bay.]

A detachment of one officer and five men has been assigned as permanent garrison of what is described as "Chile's first naval base in Antarctica."

Although Graham Land—where there are already some British and Argentine groups—is included in Chile's territorial Antarctic claims, Sovereignty Bay cannot properly be called a part of Graham Land.

A seaplane from the expedition's transport Angamos has carried out survey flights of Graham Land and Commodore Gueslaga reported that a seaplane anchorage had been made ready at Sovereignty Bay.

The Chilean Navy Air Command had ordered a seaplane base built on the Chilean side of Magellan Strait for future flights to Antarctica.

BUENOS AIRES, Jan. 2 (U.P.)—The Ministry of Marine announced today that the naval transport Patagonia would leave for Antarctica on Saturday to begin a wide program of research and enlargement of Argentina's meteorological outposts, to be carried out through 1947.

The Ministry also disclosed the sailing of the Santa Cruz today for Tierra del Fuego, carrying building materials and apparatus for improving existing installations.

Besides its announced aims, the Argentine expedition is evidently designed to strengthen this country's territorial claims in the Antarctic. On Oct. 9, the Government issued a decree claiming sovereignty over the submarine platform adjacent to the Argentine mainland, the continental shelf and the waters above it, which, when defined, will include a large portion of Antarctica.

BUENOS AIRES, Jan. 30 (AP)—The Argentine Navy Ministry announced today receipt of a wireless report from its Antarctic expedition, which stated that the transport Patagonia had encountered a violent storm and was making slow progress southward off Smith Island in the Lower Shetland group north of Palmer Peninsula.

Argentine Flyers Begin Work

BUENOS AIRES, Feb. 20 (U.P.)—The Argentine Antarctic expedition, which left Buenos Aires early in January, has established a temporary base in Graham Land and is making aerial surveys and submarine soundings, said a report today from Capt. Luis Garcia, commander of the expedition.

A patrol plane from the naval transport Patagonia has photographed hitherto unknown parts of Graham Land, Captain Garcia said. The transport Chaco has sailed south toward Laurie Island with a replacement crew for the Argentine weather station there.

BUENOS AIRES, April 2 (U.P.)—The Ministry of Marine announced today that the Argentine flag had been raised over a new weather observatory recently constructed on Gallow's Point, Camma Island, in the Melchior Archipielago "thus reaffirming Argentine sovereignty claims over those regions" of Antarctica.

Argentine Mission Returns

BUENOS AIRES, April 23 (AP)—Argentina's naval expedition to the Antarctic returned today and was greeted by cheering thousands massed in front of Government House. President Juan D. Peró told the sailors that the "Argentines had shown once again what they could do in defense of our rights," and thanked them for a "duty well done."

Argentina claims all islands and the portion of the Antarctic Continent that lies between longitude 25 degrees west to 74 degrees west, and as far north as the Falkland Islands and south to the Pole. This area includes the Falkland Islands, South Orkneys, South Shetlands, North and South Grahamland, South Sandwich Islands, South Georgia Island, parts of Coatsland, and a pie-shaped wedge of the continent to the South Pole.

Chile claims all the territory and islands "discovered and undiscovered, between the fifty-third and ninetieth meridian."

Argentina bases its claims on exploratory work in the Antarctic, dating back to 1903, and the establishment of a meteorological station in the South Orkneys in 1904, which has operated continuously since. It also argues that it is not only the country nearest the Antarctic, but that the islands and mainland are merely extensions of the Andes Mountains and the mainland of Argentina.

Chile Protests to Britain On Claim in Antarctica

LONDON, May 24 (UP).—A Foreign Ministry spokesman said today that Chile's protest in a new Antarctic "incident" has been received and is "now being considered." He did not indicate what official reaction could be expected.

The Chilean note followed a visit by British Captain E. W. Bingham, commander of the Fitzroy, hydrographic survey vessel, to a new Chilean garrison at Puerto Soberania on Deception Island off Graham Land (Palmer Peninsula).

Captain Bingham reportedly handed a note to the Chilean garrison commander which drew attention to Chilean occupation of an island Great Britain considers part of her Falkland Islands' dependency. The Chilean commander reported the incident to his nation's Ministry of Defense, which formally protested to the British Embassy.

Three nations, Britain, Chile and Argentina, formally claim that part of Antarctica which includes Graham Land and adjacent islands.

Falkland Notes Revealed

Britain Denies Argentine Claim to Islands of Antarctica

BUENOS AIRES, Feb. 27 (AP).—The Argentine Foreign Office made public tonight an exchange of notes in which Great Britain refused to recognize Argentina's claim to the Falkland Islands or an extension of those claims into Antarctic territory.

The British note, dated Jan. 3, said Britain maintained her right to the Falklands, which are called the Malvina Islands in Argentina, and denied the Argentine theory that Antarctica is an extension of the South American continent on which Argentina based her claims in the polar area.

PENGUINS AIR JAUNT

WELLINGTON, N.Z.—(C.P.) — A penguin brought from the Antarctic by Admiral Byrd's expedition was delivered to its new home at Wellington Zoo by a helicopter from the Coast Guard cutter North Wind. The helicopter landed in the zoo grounds.

Unilateral Claims To Antarctic Areas Favored by Britain

By the Associated Press

LONDON, Jan. 23.—A policy of every man for himself in staking claims to Antarctic lands was outlined today by an official source, who said the British government favored unilateral claims.

But, he added, Britain would not recognize claims to Antarctica based on assertions that some countries are connected to the polar regions by an undersea "continental shelf."

Outlining the government's views, this source said there are three grounds under international law by which a claim to unexplored land can be made:

1. Discovery.
2. Occupation within a reasonable time after discovery, although this squatting need not be permanent.
3. Applying administration suitable to the area.

On this basis, he said, Britain claims several areas under letters of patent in 1908 and 1907. The areas are the Falkland Island dependencies, including the South Orkneys, South Shetlands, South Sandwich Islands, South Georgia, Graham Land and Coats Land.

Britain recognizes, he added, two dominion stakes—New Zealand's claim over the Ross Dependency based on an order in council dated July 30, 1923, and Australia's claim to the Australian Dependency, defined by orders in council dated February 7, 1933.

In addition France's stake to Adelie Land is recognized by Britain under an exchange of notes in 1938 and Norway's decree of January, 1939, claiming Queen Maud Land.

These constitute all the claims recognized by Britain on the south polar regions.

Through 1943, a British census shows, 75 Antarctic scientific expeditions have been sent out by Britain or the dominions, 29 by Norway, 24 by the United States and 19 by France.

The Colonial Office administers Britain's claim under the Falkland Island Dependencies Survey, which maintains five stations.

They operate meteorological stations, particularly concerned with the movement of Antarctic weather depressions, and are making scientific studies.

BELGIANS CITE EXPLORER

Ask Recognition for Gerlache, a Pioneer in Antarctica

BRUSSELS, Feb. 26—The Belgian Foreign Office, it is learned, is trying to find a means whereby the Antarctic discoveries made by the Belgian explorer, Adrien de Gerlache, nearly fifty years ago can be generally acknowledged.

De Gerlache sailed from Antwerp in 1897. Many persons here say he opened the way to the South Pole and are anxious to perpetuate his memory in the place names he bestowed. The explorer, who preceded Scott, Amundsen and Shackleton by a decade, did not make any territorial claims, but did make a notable contribution to the saga of Antarctica.

BRITISH ON SURVEY INTO GRAHAM LAND

LONDON, Feb. 20 (U.P.)—A British survey party in Antarctica was preparing today for a trip with dogs and sleds across the unexplored southern sector of Graham Land peninsula before the South Polar winter sets in, the Foreign Office reports.

The party of seven men is establishing a base on a 5,000-foot plateau inland from Marguerite Bay, where the Ronne expedition from the United States soon will start work. From the base, the Britons hope to go overland by sled to the ice-bound east coast of the peninsula, which cannot be approached from the sea. It probably is fifty to seventy-five miles across the peninsula to the ice shelf of the Weddell Sea.

The party will try to blaze a trail through the glacier-infested mountains that are the backbone of Graham Land. Planes have flown over the mountains, but they have never been crossed and explored on foot.

Britain has about thirty men in the Falkland Dependencies region of Antarctica. They are stationed at Hope Bay, on the northern tip of Graham Land; on Marguerite Bay, at Port Lockroy, midway between Hope and Marguerite bays; on Admiralty Bay, below Port Lockroy; on Deception Island, near Hope Bay; on Argentine Island, off the west coast, and on Laurie Island in the South Orkneys.

French Claims in Antarctica

French claims to Antarctic territory comprise about 125,000 square miles known as Terre Adelie, or Adele Land. The region was discovered in 1840 by the French explorer Dumont d'Urville, who claimed it in the name of the French Crown. In 1924 the French Government published a series of decrees reserving its rights in the land, making the territory an official dependency of Madagascar and annexing its territorial waters. French possessions near the Antarctic continent are the islands of New Amsterdam, Saint-Paul, Crozet and Kerguelen.

Dives Under Dying Whale To Take Its Temperature

LONDON, March 14 (UP).—An intrepid scientist swam under the belly of a dying whale in the Antarctic and took its temperature, the Department of Scientific and Industrial Research revealed today.

Dr. R. A. M. Case, thirty-one, leader of a scientific team on board the whale factory ship Balaena, wanted the temperature of a whale at the moment of death as part of his research into the use of whale meat for human food.

Clad in a war-time "frogman" suit, he plunged into the icy waters and dived beneath a whale that had just been harpooned and stabbed the whale with a special thermometer.

Experts Fear Whale Is Nearing Extinction

By the United Press.

LONDON, June 16.—The savagery which marked man's assault on the wild life of the American great plains and the African veldt is being repeated in the slaughter of animals of the ocean. Scientists and marine experts warn that economic extinction of many valuable forms of life may be imminent.

This season's whale catch in the Antarctic, last stronghold of the world's largest mammals, was less than it should have been after a seven-year respite. Hunting lagged during the war.

Latest totals on the whale catch are incomplete. Russian and Japanese catches were not reported with those of other countries, but early estimates said more than 15,230 blue whale units were taken, giving 1,772,934 barrels, or 295,489 tons, of whale oil and 67,725 barrels, or 11,287 tons, of sperm oil.

That would amount to a total of 306,776 tons of whale products. By an old-time whaler's rule-of-thumb, the figure, divided by 10, would give the approximate number of whales actually caught—30,678. The term "blue whale unit" is used by the international whaling convention as a convenient term for classifying catches. All types of whales are grouped, according to size and output, in accordance with the worth of that gigantic prize of the sea, the blue whale.

That sounds like an enormous single season and it is. But in the number of whales to be killed in a record year of 1938-39, when more than twice the number of expeditions were working than went south this season, more than 45,000 whales were killed.

Fewer whales than that were taken annually in the "golden age" of whaling 100 years ago, when Nantucket, New Bedford, and Hobart, Tasmania, were the world's major whaling ports. And yet it was the comparatively primitive whaling of that day which chased the great beasts from six of the seven seas.

"The years of respite during the war have done little to halt the decline in the whale population," Harald B. Paulson, Norwegian whaling authority, said. "There is no hope for pelagic whaling without strong international regulation."

The decline, he said, was most marked in the best species—the blue whale — where reproduction dropped about 17 per cent. Will that mean their extinction?

One of Britain's foremost marine zoologists, Prof. C. M. Yonge of Glasgow University, does not think so, although he fears they may be driven into economic oblivion.

Largest Whaling 'Factory' Is Launched at Belfast

By The United Press.

BELFAST, Northern Ireland, June 19—The world's largest whale factory vessel, the Thorshavet, was launched today, vacating a slip that may be used to build another still larger one for Argentina.

Officials of Harland and Wolff, Ltd., who built the Thorshavet for a Norwegian firm indicated that Argentina was making inquiries about the construction of a battleship-size 32,000-ton whaler.

The Diesel-driven Thorshavet —most whale factory vessels use steam—is the first foreign flag whaler to be built here since 1931. It was doubtful today whether it would be ready for the 1947-48 Antarctic season.

Because of a defect in his suit's breathing apparatus, Case lost consciousness, but he was rescued without injury.

Japan to Send Out 15 Whalers

TOKYO, June 26 (AP)—A whaling expedition of fifteen ships will be sent to the Antarctic by the Taiyo Fishing Company, the Kyodo news agency reported today from Shimonoseki. Antarctic whaling operations were approved recently by Allied headquarters.

British Whaler Has Big Haul

CAPETOWN, South Africa, April 21 (U.P.)—The British whaler Balaena reached Capetown today with the largest single haul brought out of the Antarctic this year. The Balaena, after four months in hunting waters, arrived with 184,500 barrels of whale oil and 7,500 barrels of sperm oil for a total value of $8,000,000. It was the largest haul among the fifteen expeditions afloat, except possibly that of the Russians, who are still hunting.

POLAR WHALE HAUL PUT AT $100,000,000

WASHINGTON, May 4 (AP)—Whalers hauled oil-rich carcasses valued from $100,000,000 to $125,000,000 from waters around the South Pole during the December-April season, an official estimated tonight, but American whalers were not among them.

The estimate was made by Dr. Raymond M. Gilmore, biologist of the Fish and Wildlife Service. He accompanied the Navy's Antarctic expedition to make a whale count and counted 663 in 25,000 square miles.

Dr. Gilmore said that fifteen whaling ships operated in the Antarctic from Dec. 7 to April 7—seven Norwegian vessels, three British, and the rest Japanese, Russian and Dutch. The Allies allowed the Japanese to operate two whalers to help meet their need for fats.

The catch was limited by international agreement to 16,000 blue whale units a year. A unit consisted of one blue whale or two fin whales.

"It was the first whaling since before the war, and with Europe's need for fats, they caught the limit," he said.

"That catch, about 1,600,000 tons of whale, would provide about 250,000 tons of oil worth, say, $450 a ton, compared with a pre-war price of $150. Furthermore, before the war the catch was divided among twice as many ships."

BLUE WHALES ON WANE

LONDON, Jan. 13 (U.P.)—Lloyd's List, a shipping newspaper, said today that blue whales were both thinner and scarcer in the 1945-46 season than ever reported before.

It quoted statistics from the Norwegian Whaling Association that blue whales yielded a "low record" average of 98.9 barrels of oil each last season. In 1939 the average yield was 111.08 barrels.

The number of blue whales caught in the 1945-46 season was 30.7 per cent of the total catch, contrasted with 36.7 per cent in 1939 and 79.9 per cent in 1932.

Some Whales Have Harems, Bachelors Sulk in Antarctic

By the Associated Press.

WASHINGTON, June 26.—Dr. Raymond Gilmore, the government's expert on the love life of the whale, issued his eagerly awaited report today.

His verdict: Some have a lot. Some don't have any. It all depends.

Dr. Gilmore, biologist for the Fish and Wildlife Service, made his report for the Smithsonian Institution after his trip with the Navy's Antarctic expedition.

It seems that sprem whales are polygamous. One or two males of this species will collect a bunch of cow whales and set up this seakeeping in tropical waters.

This leaves quite a few male whales with nothing much to do but go down to the Antarctic and sulk. They do.

The government takes a very unromantic view of a whale suffering from unrequired love. As far as the government is concerned, a male whale which can't be caught by a female may as well be caught by anybody.

But a whaler can't make enough money catching just bachelor whales. If he wants to fetch home the bacon, he must also fetch home some of the more valuable beleen whales.

The baleen isn't like the sperm whale. He takes only one wife.

It wouldn't take long, Dr. Gilmore thinks, for this species to become extinct if it isn't protected.

That's why he'd like to see the continuation of an agreement that sets up a sort of whale reservation in the Antarctic.

ALASKA TEST SEEN AS AID TO INDUSTRY

Services Task Force Makes a Cold-Weather Study for Clothes and Machinery

ANCHORAGE, Alaska, Jan. 29 —Maj. Gen. Howard A. Craig, Commander in Chief of the Alaskan command, which includes the Navy, praised the work of the Task Force Frigid today and said its findings would benefit private industry and civilians as well as provide military data.

"Task Force Frigid is doing a magnificent job," General Craig said. "It is learning a lot of things, one of which is that you cannot improvise clothing and equipment for such low temperatures.

"The work of the task force will pay the nation big dividends," he continued. "The people of Montana, North and South Dakota and Minnesota will surely benefit in improved vehicles for cold weather."

Infantrymen, tankers, medics, artillery men and service troops who served with such proud outfits as the First, Third, Fourth and Fifth Infantry Divisions, the Second and Third Armored Divisions and the Eigthy-second Airborne are participating in the operation. They are moving over the frozen, snow covered terrain around here testing man's endurance and the efficiency of equipment in temperatures that range from 40 to 53 degrees below zero. The exercise is called "Task Force Frigid."

Observers from America's automotive, aircraft, telephone, rubber, gasoline and optical industries are also on the scene.

There was nothing secret about the maneuvers, Col. Paul V. Kane, commanding officer of Task Force Frigid, declared in an interview.

"We are simply trying to find out if troops can live and fight in these extreme temperatures," he continued, "and if the equipment of a modern army can function at twenty to sixty degrees below zero."

In temperatures as low as those of this last week-end, little or nothing can be done by men in the field. A rule of thumb worked out here is that with each degree drop beyond zero a man spends 2 per cent of his energy just taking care of himself and trying to keep warm.

Thus, at fifty degrees below, all his energy, it is figured, is needed to keep him alive, while below that there is no doubt that man cannot long survive in the open.

Sourdoughs and even Eskimos "hole up" when the temperature drops to 40 degrees below. They even refuse to take dog teams out. Mercury in thermometers freezes at minus 40 degrees and, for that reason, alcohol thermometers are used here.

Long exposure to low temperatures such as these cause the body temperatures of men to drop even though the men do not think they are suffering more than they can stand from the cold. These men, removed to warm places, it was said, were back at full efficiency and health in a short time.

The Air Forces also have their problems with the extremely low temperatures.

In addition to the troubles of starting cold engines, the planes create their own ground fog by merely running their engines. The fog is a condensation of ice particles, similar to the vapor trails from a plane in flight. The fog created by half a dozen fighter planes warming up and taxiing out for take-off covers an airfield with a fog blanket about one hundred feet thick and makes landings difficult, if not impossible.

One of the problems the air units are now working on here concerns search and rescue methods for airmen forced down in the frozen wasteland.

As a part or the experiments being carried on, airmen receive survival kits and are sent out in the snow to see how they would live. The kits are made up of a double Arctic sleeping bag, food, extra mukluks, which are cloth boots, and aid supplies.

The amazing adaptability of the human being is clearly shown in the statement of Col. Paul V. Kane, commanding officer of Task Force Frigid, near Fairbanks, that the men function better in the deep, dry cold than the machines and arms. No single piece of equipment stands up to the cold so well as the GI, Colonel Kane said.

Lubricants are one of the big problems. From about 40 degrees below zero to 67 degrees below oil freezes solid. As one sergeant put it: "I can pour oil out on the ground and come back in a few hours, pick it up and beat a man to death with it."

Electrical wires freeze and become so brittle they can be snapped as if they were pretzels. Batteries freeze and refuse to start vehicles or even to light the flash bulb of a camera in the extreme temperatures. Tires freeze solid and can be chipped by striking them with a hammer.

A variety of tents, including some Swedish and Japanese mountain tents, are being tested. None is entirely satisfactory, but the round Japanese tent is said to show the greatest possibilities.

Several different kinds of sleeping bags, and a "foxhole sleeping bag" for infantrymen, with hood, arms and legs to permit mobility, are being tested. Some of the men say they are "fairly warm in them" and others say they are far from comfortable, although not frostbitten.

In the matter of clothing, many types are being tested. The problem is to have several thin, loose layers of clothing to conserve body heat, prevent perspiration and still give mobility. In this matter a lot of progress has been made.

B-29 Flies Over Pole, Broadcasts Weather

By The Associated Press.

WASHINGTON, March 20 —An Army Air Forces B-29 flew over the North Pole this week, starting routine weather reports from the top of the world.

The B-29, converted from a bomber into a weather-observation plane, was commanded by Brig. Gen. Donald M. Yates, AAF weather expert, who arrived today in Washington.

No effort was made to keep the flight over the Polar cap secret. The airplane transmitted a weather report from the "position North Pole" in uncoded message available to all other nations listening in.

The B-29 left the Army base near Fairbanks, Alaska, was in the air 16 hours 30 minutes, returning early Tuesday morning.

Task Force Frigid Puts Up Bridge

Medium tanks cross Tanana river, near Fairbanks, on bridge made by placing logs in layers on ice and pumping water on them until they freeze into solid mass. This bridge is 60 inches thick.

WITH U. S. ARMY TASK FORCE FRIGID NEAR FAIRBANKS, Alaska, Jan. 23—The thermometer read a little more than 30 degrees below zero tonight as this group of 1,500 officers and men under Col. Paul V. Kane bivouacked for the night.

Task Force Frigid is an exact miniature of a regular Army infantry division, with one exception: it has no G-2, or intelligence department. In addition to modeling the infantry, the task force has a test section to study, evaluate and analyze data on men and equipment. In all, 380 different items used by Army ground and air forces are being tested.

Early this morning a group of American correspondents and observers from several major manufacturing industries, awkwardly bundled in Army-issued arctic clothing, piled into amphibious vehicles and jeeps and left for the field to see Task Force Frigid in action.

On reaching the frozen Tanana River we saw an ice bridge, the first ever built by United States Army Engineers, that had been thrown over the Tanana by the Tenth Engineers under Capt. Roy T. Gordon. There are sixty inches of ice on the Tanana and the log ice bridge adds another thirty inches. The bridge is made of a layer of logs, corduroy fashion. From a hole cut in the ice, water is pumped over the logs to freeze. This bridge is said to be strong enough to carry anything a Class 70 bridge of the Army can bear. Eight tanks of the Second Armored ("Hell on Wheels") Division rumbled and bounced over the bridge soon after the group arrived. The tanks were under the command of Capt. George Sheets of Marlborough, N. J.

Frigid Army Is Back In Balmy California

OAKLAND, Calif., April 24 (AP) —The 1,300 officers and men comprising the first home-bound echelon of the Army's task force Frigid landed here yesterday after months of testing fighting men and equipment in the Arctic.

"The men held up better than the machines," declared Col Paul V. Kane of Corvallis, Ore., commanding officer. "And farm boys held up better than city boys."

The biggest problem in Arctic maneuvering, Colonel Kane said, proved to be "oil lubrication at extremely low temperatures."

"No matter how good the equipment, it's only as good as the lubricant. At minus 50 degrees the situation is critical. And we had 26 days of temperature below minus 50 degrees."

RARE ALASKAN PLANTS ADDED TO COLLECTION

AMES, Ia., Jan. 25 (AP)—Dr. J. P. Anderson, 72 year old botanist at Iowa State college, is busy adding several hundred new specimens to his private collection of Alaskan plants. It is the largest such collection in existence.

The latest additions were gathered by Dr. Anderson on a recent 9,250 mile automobile trip to the territory over the Alcan highway. His two month trip yielded some species never before collected in that region.

Dr. Anderson estimates that his Alaskan collection includes "somewhere between 15,000 and 20,000 specimens." He says he has been too busy in recent years to make an accurate count.

The botanist began his collection in 1914 when he joined the staff of the experiment station at Sitka. He continued the work from 1917 to 1927 when he operated a flower shop at Juneau.

ODD ADAK WEATHER MARKS ARMY TEST

Task Force Artillery Works in Warm Sun, While Infantry Is Chilled to the Bone

WITH TASK FORCE WILLIWAW on Adak Island, Jan. 31—The weather of this strategically important island of the Aleutian chain today lived up to its reputation for changing quickly and often as reporters observed the beginning of the final phase of maneuvers of the 919 officeers and men in this Task Force commanded by Colonel Joseph D. Raney.

While armored columns and artillery operating in the valleys of Adak basked in sunshine, infantrymen on exercises against the south slope of Mount Moffett chilled in weather that even the doughboys of both World Wars would have called impossible, and between the two extremes there was just plain ordinary weather.

Task Force Williwaw, one of three Task Forces of the United States Army now conducting cold-weather tests, is charged with testing in tactical maneuvers clothing and equipment and supplies for wet-cold climates.

To newspaper men who arrived in a bright warm sun a few hours after daybreak, Col. A. M. Gurney, commandant of Adak, said:

"Gentlemen, we have three kinds of weather here. The very good, which we call presidential weather, then Congressional, which is good, and finally just plain Adak weather, which is usually poor. I should say," he continued, looking out the window, "that this is super-presidential weather."

On the southern slope of Mount Moffett, which stands snow-capped 4,000 feet above the island and is the highest point on Adak, infantrymen of the famous Third Division maneuvered in spongey, frozen tundra that lacked a single dry spot.

Standing in foxholes in singles and pairs, members of the Third carried electrical wires from their feet and bodies to recording devices where the medics could study how much the chill reduced their efficiency. They have not yet been able to keep a man out in the rain and chill of this island for more than seventeen hours at a time.

Aleutians Task Force Returns

SEATTLE, April 29 (AP).—Task Force Williwaw, more than 900 strong, came back from the outer Aleutians today with G. I. draped over the transport rail, bands blaring on the pier and relatives waiting. Colonel Joseph D. Raney, commander of the exhaustive tests of men and machines, and Lieutenant Colonel W. A. Enemark, senior test officer, spoke of the results of the seven-months work on Adak Island and the high morale maintained. "No mobile equipment is satisfactory up there except the weasel—but that doen't mean the operation was a failure by any means," Colonel Raney said. "We Gained much valuable information."

Mrs. Washburn Tells of 'Thrill' In Scaling Mt. McKinley's Peak

The Christian Science Monitor

Mrs. Bradford Washburn, first woman to climb to the 20,300-foot summit of Mt. McKinley, describes in these words what it felt like to reach the top:

"It was the thrill of my life. I had been living from day to day during our stay on the mountain, enjoying the exercise to the fullest and determined to climb as high as I could. The worst obstacles for the men as well as for me were the altitude and the physical stamina required to make the final climb.

"On the day of the final ascent, June 7, we started slowly, climbing on three separate ropes. At 19,200 feet, the view was stupendous. One of my companions who had not yet become acclimated turned back. That was a wise but difficult decision. We had to stop every few minutes and lean on our ice axes and adjust our light packs.

"By 2 p. m. we had reached a pleasant spot for luncheon. Lunch was a rest and a bit of orange juice, a few figs, and a slice of bread Thirty minutes we started the final steep climb. We moved slowly while the leader of the rope chopped occasional steps where the slope was blue ice under the snow.

"As we reached the final ridge, the second rope lingered behind to take pictures. We were moving very slowly, and our breath was very short. The summit was just above us, but we could not hurry. With short rests on our ice axes every few steps, we finally neared the summit dome. The men on my rope stepped aside saying, 'You go ahead.'

"I stepped on to the summit, turned, and looked 20,000 feet down one sheer slope. I stepped back quickly to gain my balance and felt something odd under my feet. This proved to be two willow wands left there by the Army Expedition which ascended the mountain in 1942.

"After catching my breath, full realization gradually swept over me that I had actually reached the top of North America.

"Tension so long pent up in all of us gave way to great fun. We took pictures of everything and everyone. But our gaiety subsided in sudden realization that it was 20 degrees below zero with a 25-mile-an-hour wind trying to blow us off our hazardous footing. I was almost overcome by the unbounded thrill of having achieved my goal."

(Copyright, 1947, by the New England Museum of Natural History.)

When It's 72 Below Zero

By the United Press.

STILLWATER, Okla., March 8.—Odd things can happen when the temperature gets down to 72 degrees below zero.

So reported Dr. Clark A. Dunn, Oklahoma A. & M. College engineer, who viewed operations of Task Force Frigid at Fairbanks, Alaska. Dr. Dunn wrote home that the terrific cold flattens auto tires if the vehicle stands still any length of time.

The tires assume their normal shape after the car has been driven some distance, he said.

Batteries are taken from cars every night and stored in warm buildings. A car which has stood outside all night must be warmed up for an hour before it will move.

Body's Heat Preserved By Army's Mask

By SCIENCE SERVICE

WASHINGTON, A heat loss equal to the calories from a day's food might be saved by the Army's new mask and respirator now being tested by the Army Ground Forces Task Force "Frigid" at Fairbanks, Alaska, and in the Antarctic.

The respirator follows the principles of good power plant engineering. Engineers will recognize it as a heat exchanger such as is used to recover the heat from gases or liquids before they are discarded up the chimney or down the sewer from power plants.

The power plant in the body of a man exercising moderately at a temperature of 40 degrees below zero Fahrenheit loses heat equal to 1730 calories in 24 hours in the breath exhaled from the lungs. Food supplying that many calories in a day is enough to maintain a sedentary worker in temperate climates. If the respirator is 100% efficient it could therefore save the equivalent of a day's food supply. Its actual efficiency will be determined from the tests now underway. It showed a "high degree of efficiency" in tests conducted under sub-zero temperatures at the Quartermaster Climatic Research Laboratory at Lawrence, Mass.

The respirator is light, simply constructed and made of soft rubber to fit snugly about the nose and mouth. It is worn partly within and partly outside the arctic face mask. The portion within the mask is held in place by the pressure of the mask. The section outside the mask consists of a cylindrical tube which is filled with metal wool made of copper or stainless steel.

The metal wool absorbs the heat contained in the vapor expired by the breath and releases this heat to the inspired air. In this way, the upper respiratory tract and lungs of the wearer are protected against extremely cold air and body heat is conserved.

U. S. ALEUTIAN BASE CAMP—This general view shows Task Force Williwaw's base camp on Adak Island. Maneuvers are being staged to determine the means of carrying out successfully military operations in damp and chilly climates.

U. S., CANADA PLAN 9 ARCTIC STATIONS

Weather Posts to Be Jointly Established and Operated—Ottawa to Hold Control

OTTAWA, March 4—Nine new weather stations are to be established in the Arctic during the next three years by the Canadian Government in cooperation with the United States, Reconstruction Minister C. D. Howe announced in the House of Commons today.

It is planned, he said, to have the most northerly of these weather stations, in the vicinity of Eureka Sound, approximately 600 miles from the North Pole, and the main station, at Winter Harbor on Melville Island, in operation in the coming summer. The location of the other stations will be decided later.

While the United States has undertaken to assist Canada in establishment and operation of these stations, Mr. Howe said, they will be under the control of the Canadian Government. Canada will supply the officers in charge and United States technical personnel will be included in the staffs.

Mr. Howe said it was hoped that Arctic weather information could be exchanged with Russia which maintains a large number of stations on the other side of the North Pole. There already is extensive exchange of weather information between the two countries.

The establishment of the Arctic stations will provide meteorologists with accurate information that will be of inestimable value to the Canadian national economy and to other nations, Mr. Howe said. He added that their establishment would also determine the feasibility of air routes across the polar regions.

It is considered essential, Mr. Howe said, that the stations be operated for at least five years to determine the advisability of continuing or expanding weather reporting operations in the Arctic.

Mr. Howe asserted that Canada was grateful for the assistance being given by the United States. He said that assistance would be invaluable until enough technically qualified Canadian personnel were available.

Aerial Mapping Of Canada Pushed

WASHINGTON, Jan. 23.—Aerial camera mapping of Canada is being carried on at a rate of nearly 200,000 square miles per year, John Carroll of the Department of Mines and Resources, Ottawa, told the American Society of Photogrammetry meeting here.

He said complete aerial maps of Canada's 3,700,000 square miles may be finished in a few years under a project which has been under way a quarter of a century.

'Northern Passage' Found By Coast Guard Vessel

By The Associated Press.

SEATTLE, April 4—The Coast Guard ice-breaker North Wind, on a North Atlantic scientific cruise last summer, discovered a potential "northern passage," the 13th Coast Guard District Headquarters said today.

Capt. Richard M. Hoyle, Coast Guard district operations officer, who commanded the North Wind on this expedition, expressed the opinion that the vessel, or any of its type, could easily go from New York to Seattle via the "northern passage."

He said the North Wind went as far west as Dundas Peninsula on Melville Island, only 750 miles east of Point Barrow, Alaska. Scout planes reported "heavy ice" for about 100 miles from that point, he said.

"I am sure the North Wind or a ship like her could smash through the toughest part in a week," he added.

The North Wind did not go through because she had other orders.

CANADIAN POLICE SHIP OFF TO THE ARCTIC

VANCOUVER, June 28 (Canadian Press)—With all hatches battened tightly and a crew of twelve men who can look forward to eighteen months of snow and ice, the police patrol ship St. Roche will sail northward from here tomorrow.

She goes to those lands where only the hardiest survive through the blizzards; where one stays up twenty-four hours a day with the midnight sun. There she will "freeze up" for nine months at Coronation Gulf, 1,000 miles east of Point Barrow, Alaska.

The 80-ton boat has made two trips through the Northwest Passage. Only the captain, Inspector Henry A. Larsen, 47, has been on both trips. Under his command are twelve men, all Arctic-seasoned.

The main duty of the patrol ship is to "look after the general welfare of the territory." The captain emphasized that there "was no military significance."

The supplies include dog biscuits for a dog team that will be picked up at Norfolk on Victoria Island and used to visit scattered settlements.

Seal Hunter Rescued

ST. JOHN'S, Newfoundland, April 7 (AF).—A seal hunter was carried miles out into the North Atlantic on an ice floe. He was rescued by a daring motor boat pilot after four days of drifing.

Speed of Sound.

The speed of sound varies with temperature from 660 miles an hour at 67 degrees below zero to 800 miles an hour at 100 degrees above zero.

WEATHER STATIONS FOR ARCTIC REGION

The United States and Canada will cooperate in the establishment of nine meteorological posts. The first two will be set up at Eureka Sound (1) and at Winter Harbor (2). Sites for the others are to be selected later, it was said in Ottawa.

Joint Station in Arctic Sends Weather Report

Ottawa, May 20 (CP).—The first of the joint Canadian-American Arctic weather stations already is sending out daily reports from Eureka Sound, on Ellesmere Island, about 600 nautical miles south of the North Pole, Transport Department officials said today.

A permanent staff of six men—three Canadians and three Americans—has been established in prefabricated structures for about a month, sending out radio reports to the United States meteorological base at Thule, Greenland, roughly 375 miles east.

They were flown in from Thule in April by United States Navy planes which landed on the ice of Slidre Fjord. With them, into that island pinpoint, went supplies, equipment, their radio and prefabricated shelter, completely insulated and ready for the Arctic cold.

In mid-July, a United States ship will put out of Boston with equipment and personnel—a permanent staff of 17 men, to establish a larger station at Melville Island, at a spot known as Winter Harbor, which is about 900 miles from the pole.

In accordance with establishment of nine such stations over a period of years, Winter Harbor will become the central or mother station. The others will funnel their reports into it daily. Winter Harbor will be the only major weather station between Greenland and Alaska.

The Boston boat, provided by the United States Government, will also carry equipment enough for the establishment of another two stations which it is planned to erect in 1948, a Transport Department official said.

The Eureka Sound station is in charge of J. L. Courtney, a native of St. John's, Nfld., while Donald Cleghorn, a Canadian, will be in charge at Winter Harbor.

Ellesmere Island is covered by a glacier with the exception of a narrow coastal strip. Melville Island has no glaciers and is somewhat more hospitable than Ellesmere, showing evidences of both coal and oil.

The Eureka Sound station is the fourth weather base to be established in the far Canadian North, the others having grown up in years gone by at Arctic Bay, near the top of Baffin Island; at Coppermine, on the north shore of the mainland on Coronation Gulf, and at Aklavik, at the mouth of the Mackenzie River.

War Declared On Insects In Northland

Industrial Development Impeded by Pests

OTTAWA, May 16 — (C.P.) — Canada declared war yesterday on the greatest current aerial menace to domination of her own northland.

The Agriculture Department announced that an entomological task force would depart this month for Fort Churchill, Man., and Baker Lake, a Northwest Territories outpost some 300 miles and millions of mosquitos and black flies north of Churchill.

Their purpose: to study biting insects under field conditions and to test control materials and equipment in recognition of "how seriously swarms of biting insects are delaying development of Canada's Northland."

For soldiers at Churchill's joint services experimental base and at other defence pinpoints in the Arctic region, this would be juicy news. When a party of reporters visited there late last winter they found the troops already discussing the days when the Tundra would thaw out and the mosquitos and black flies would be back in squadrons, airborne battalions and echeloned in depth. One gathered at that time that heavy nets and profanity were their sole weapons in a losing fight.

The Agriculture Department's announcement quoted the task force's chief, Dr. C. R. Twinn, as saying that the pests are "sufficiently plentiful and vicious to impede industrial development."

Author of numerous works relating to medical and veterinary entomology and an authority on insect pests of man and animals, he recalled that "in a section of Northern Quebec, lumbering operations were halted for a time last summer when men threw down thier saws and axes to flee before the onslaught of mosquitos and black flies."

Midges and moose flies will also be studied by the entomologists.

At the invitation of the Defence Research Board, the season's program will include the testing of fly-resistant clothing, insecticides, repellents and their rates and methods of application. In this, the entomologists will test a variety of spraying equipment, portable and motorized power sprayers, aerosol generators and airplanes. Mass attacks will be made on winged adult as well as on immature pests by the scientists who intend to experiment with a barrier of residual insecticides in an attempt to keep a whole area free of insects.

Alaska Caribou Cross to Canada

The vast herds of Alaskan caribou which once crossed the Yukon River near Circle in their annual migration have dwindled to a small portion of their former numbers, the Fish and Wildlife Service reports. Advices from Aklavik, on the MacKenzie River, show a tremendous increase in the Canadian herd, and it is possible that the Alaskan herd may have migrated into Canadian territory. Later reports from the Kuskokwim and Nushagak River district show an increase in numbers of carbiou. These are the mountain or Osborne caribou which formerly roamed that area.

81 Below Reported At Yukon Airfield

By The Canadian Press

TORONTO, Feb. 2—The coldest weather ever recorded on the North American Continent was experienced at remote Snag airport in Canada's Yukon today and official Government thermometers were unable to cope with the tumbling temperature.

The Dominion Weather Bureau here said that official thermometers were graduated just to 80 degrees below zero Fahrenheit. Their telegraphed reports from Snag reported minus 83 degrees but they concluded it was calculated from improvised markings, so set the official low as 81 below zero.

Weather Bureau men here, discussing the new record temperature, spoke enviously of the "Met" men at Snag who watched the thin red line. "It had to be an alcohol thermometer," one weather man said. "Mercury freezes at somewhere around 40 below."

Alaska Highway Is Kept Open All Winter by Canadian Army

By Ansel E. Talbert

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EDMONTON, Alberta, March 4.—Canadian Army volunteers have kept open the Alaskan Highway throughout the winter and are taking steps to integrate it more closely into the highway systems of Canada and the United States, it was announced here today.

Food convoys and other traffic have been going through regularly to Alaska, according to Colonel H. E. T. Doucet, of the Department of National Defense, who disclosed that all work connected with repair and maintenance of the highway is the direct responsibility of approximately 300 officers and men of the Royal Canadian Engineers. These are commanded by Brigadier Geoffrey Walsh, chief engineer, and their work is being aided by civilians chosen for their special knowledge.

The total Canadian staff of technicians and crews engaged in maintaining the highway now numbers about 700. This organization is divided into a technical section, a road maintenance company and maintenance camps distributed along the highway.

The Canadians have work crews of approximately eight men at each of the camps. These crews have the responsibility for grading, repairing washout and snowslide damage, doing minor ditching and patrolling on sectors of sixty to eighty miles.

All these camps must be supplied regularly with everything from a pick handle to fresh vegetables. To accomplish this and to also supply the Royal Canadian Air Force bases in the Northwest, the Royal Canadian Army Service Corps is operating out of two towns famous in the gold-rush days—Dawson Creek and Whitehorse. Repairs are being made to army and air force equipment by men of the Royal Canadian Ordnance Corps and the Royal Canadian Electrical and Mechanical Engineers, who maintain two workshops on the highway for this purpose.

The highway, which the Canadians have renamed "The Northwest Highway," was built by the United States during the war as a defense measure to speed supplies to the Arctic in the event of enemy invasion there. After the war it was turned over to the Canadian government with the understanding that it was to be kept in repair.

DEBT OWED TO LICHENS

Tiny Plants Sustain Animal Life in Polar Climes

TORONTO (Canadian Press)—Reindeer, lemmings and other cold climate animals of the semi-polar wilderness in Canada and other Northern lands manage to survive the incredibly cold temperatures because lichens, the pioneer plants of all land-grown vegetation, can withstand the bitterest sub-zero drop in temperature. One species, reindeer moss, is the chief item in the winter food of such animals. Without it, animal life in the sub-Arctic zone could not remain alive a single winter.

Lichens, though some of them are extremely tiny and insignificant to the unaided eye, are plants of amazing delicacy of structure and of great beauty. It is because of their hardiness and pioneering qualities that vegetation of the green earth of today became a reality. Lichens made the foothold, often the very soil, in which plants of later eras flourish.

Without the humble lichens, much of the earth's crust today would be as bare and lifeless as it was in those geologic ages millions of years ago, when plant life began its first colonization of the crude and rocky desolation.

Magnetic Pole Not True North

The north magnetic pole isn't where we think it is, but 300 miles farther north, Elliott B. Roberts, of the United States Coast and Geodetic Survey, informed the American Geophysical Union. Operations in the Arctic, he reported, are being seriously handicapped by lack of knowledge of magnetic conditions in that region. A similar situation exists in the ocean regions of the earth. The direction in which the compass points differs from true north and varies continuously in all parts of the earth. No survey of the ocean areas has been made in twenty years, since the non-magnetic yacht Carnegie was destroyed by fire in the South Pacific.

LORAN FOR FAR NORTH

Canada to Build Two Stations in Conjunction With U. S. Units

OTTAWA, March 25—Two low-frequency loran (long-range radar aid to navigation)) stations are to be constructed in the Far North this year by Canada as an aid to air and sea navigation, Louis St. Laurent, Minister for External Affairs, announced today. A third station may be constructed next year.

These loran stations, he explained, form a series of interdependent lighthouses by which aircraft and ships can accurately locate their position in regions where the compass becomes unreliable and the long twilight prevents navigation by the stars.

The two Canadian stations will operate in conjunction with similar stations constructed on United States territory and manned in part by American technical personnel and furnished with American equipment.

Canada May Shift Reindeer

EDMONTON, Alberta, June 30 (CP).—A. E. Porsild, of Ottawa chief botanist for the Federal government, said in an interview today the Dominion government is investigating the feasibility of transferring about 1,000 reindeer by gliders from the Mackenzie River Delta to the Hudson Bay region in Ungava and Labrador. He supervised the drive of about 3,000 reindeer from Alaska to the Mackenzie Delta in 1935 and is en route north to inspect the herd, now numbering about 8,000.

Mercy Hop Saves Eskimos

WASHINGTON, May 26 (AP)—The Army Air Forces told of a mercy mission to drop food for a colony of Eskimos marooned and starving on an island in the Arctic Ocean.

A C-54 transport was at Fort Churchill, Manitoba, on Hudson's Bay, in connection with a supply operation for joint Canadian-United States posts, when a report of the Eskimos' plight was made by the Royal Canadian Mounted Police. The plane flew several thousand miles on the trip to King William's Island and returned. The C-54 arrived over the island on May 10 and in six passes dropped food supplies from a 154-foot altitude.

An Eskimo and the Mountie who discovered the condition of the Eskimos, Constable Andrew Wilvert, flew in the C-54 to help the pilot locate the marooned natives.

11 Airmen Are Saved in the Arctic By a Daring Army Rescue Flight

WESTOVER FIELD, Mass., Feb. 25 — The eleven United States Army airmen whose B-29 crashed on Greenland's barren ice cap last Friday were flown here today by Lieut. Bobbie Joe Cavnar, 22 years old, in a C-54 transport plane.

They landed today at 7:55 A. M., after a flight of 2,310 miles from Thule, Greenland, in twenty-one hours. They left there at 11:03 A. M. yesterday.

Lieutenant Cavnar of Okmulgee, Okla., less than twenty-four hours before he landed at this field had bet his life that a sheet of ice beside the crashed B-29 would hold his twenty-ton, four-engined plane.

But he won, and some of the tricks of the wise explorers of the northern wastes, plus some newer things in radio and radar and just plain flying, saved the weary eleven men huddled in the cold.

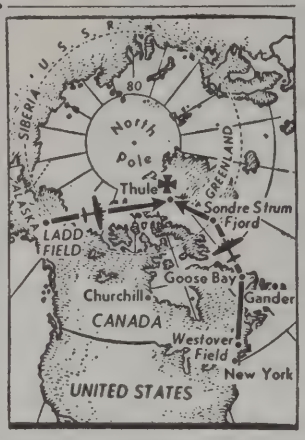
Lieut. Vern Arnett, skipper of the lost B-29, and his men were easy to spot as they climbed from the rescue plane in pale morning sunlight. Their faces were a blackish green. Suffering shock and fatigue, all but Lieutenant Arnett tumbled into ambulances and were rushed to the post hospital here. Their first wash in almost a week, and then undisturbed rest, was prescribed. Their peculiar color, it was quickly learned, came very largely from the smoke of engine oil fires they used to keep themselves warm and to guide their rescuers.

Lieutenant Arnett slumped to a couch in the terminal building and told his story.

A vicious Arctic storm hit his plane last Friday as it was cruising on celestial navigation only. Radio and radar aides were ineffective in the area. Swirling clouds and whirling winds went up to 24,000 feet. When the Kee Bird came out of them, its compass gone haywire, as it does around the magnetic pole, nobody on board had the slightest idea where they were when they sighted the bit of clear ice on which they belly landed a quarter of the way across the top of the world from their last known position.

"About all we knew," Lieutenant Arnett said, "was that we'd been in the air eighteen hours and that nobody was hurt. We couldn't fly the old Kee Bird out, but she held together when we came in. It must have been four hours before we got the radio going and reported to Ladd Field.

"We had plenty of food and by keeping in the shelter of the plane's cabins we were able to prevent real exposure. But, Lord, we were glad to see that first search plane from Ladd come over and to get the extra food."



Where 11 army flyers were rescued from Greenland ice cap.

Lieutenant Cavnar, sitting between his pretty, dark wife and chubby 2-year-old son, Jimmy, took up the story as Lieutenant Arnett stumbled off to join his mates in the hospital. He, too, had had but eight hours sleep since Saturday when he was first alerted for the mission.

Ground crews at Westover worked all day and until 2 o'clock Sunday morning preparing the plane, which took off at 3:30 and frew direct to Sonderstrom Fjord, where it picked up emergency supplies to be dropped to the Kee Bird people and proceeded on to Thule.

Next day when he began his exploratory flight he was in constant radio touch with the downed party and navigating by radar aids, which are available in that sector.

"We came in over Washington Land and saw them plainly," he said. "But that lake looked pretty short and we circled the whole neighborhood locating other lakes we might have landed on. All of them involved at least a five-mile walk—not so good in those temperatures—and we decided to try the lake the Kee Bird was down on.

"They not only told us the ice was safe for us, but they staked out a runway for us with their own bodies. The men ran out at three hundred foot intervals."

It was a tricky landing nevertheless, to put the 35-ton, four-engined plane down under such conditions. Lieutenant Cavnar brought her in over an 800-foot hill and kept his air speed up to 120 miles an hour for the landing, in order that he would have speed and power to get off if anything happened. Yet he succeeded in stopping the plane within a few hundred feet of the Kee Bird.

He revealed that he was on the ice but twenty minutes. The Kee Bird people were so excited that they threw their wooden dinghy on the oil beacon fire. But they scrambled quickly aboard and huddled in the Red Raider's tail, to keep the nose wheel clear of clogging snow which might have meant a broken strut and disaster.

"A man would freeze in the prop wash in those temperatures," he said, "and that's where those Kee Bird fellows were wise. They never got near it. Of course we never let the engines stop while we were on the ice."

He told how he taxied up and down the ice to flatten the snow and then told of a take-off that is probably a record for C-54's. He got it off the ice at a speed of 85 miles per hour with a run of only 800 feet. When he got to fifty miles an hour with flaps down ten degrees he touched off the four Jato bottles, for a total of another 1,450 horsepower, the speed went up and they were air borne.

Other members of the Red Raider's crew were Lieut. Fred Sporer, copilot, of Dallas; Lieut. William Seward, navigator, of Stoneham, Mass.; T/Sgt. Walter Hustus of South Portland, Me.; T/Sgt. John H. Suffert of Newcastle, Pa., and Pfc. Charles J. Erchak of Bealsville, Ohio.

Also on the C-54 were Capt. Donald A. Shaw, the ATC's expert on dog teams from Fort Totten and Capt. Herbert G. Dorsey, medical officer.

Maj. Gen. William H. Tunner, commanding the Atlantic Division of ATC at Fort Totten, who organized the rescue, was first aboard the arriving plane this morning to congratulate both crews.

The Army listed the rescued men as First Lieutenant Vern H. Arnett, of Riverside, Calif.; First Lieutenant Russell S. Jordan, of Albany, Calif.; Second Lieutenant Robert Lluedke, of Los Angeles; First Lieutenant John G. Lesman, of Kearny, N. J.; First Lieutenant Burl Cowan, of Grand Island, Neb.; First Lieutenant Talbert M. Gates, of Fenwood, N. J.; Master Sergeant Lawrence L. Yarbrough, of Springfield, Ore.; Staff Sergeant Ernest C. Stewart, of Birmingham, Ala.; Technical Sergeant Robert Leader, of Philadelphia; Staff Sergeant Paul R. McNamara, of Geneva, Ohio, and First Lieutenant Howard R. Adams, of Lebanon, Pa.

Danish Party to Explore Northern Greenland Areas

By Peter Freuchen
North American Newspaper Alliance

NEW YORK, Jan. 27.—Two veteran Danish explorers, Ebbe Munch and Eigel Knuth, have announced plans for an expedition to the northernmost land in the world. Planned as a three-year junket, the Danish-sponsored project will visit Pearyland, mistakenly thought by its discoverer, Admiral Robert Peary, in 1901 to be an island separated from Greenland.

Admiral Peary, who was the first man to reach the North Pole, and the only one not to go there by air, made his error when he viewed the region from atop the Greenland icecap. Looking between two mountain ridges, he incorrectly surmised that water leading into the sides of the valley below joined beneath the icecap to form a sound. He labeled this area Peary Channel, but 15 later polar expeditions (two of them by dirigible and the rest by plane) furnished information proving that Pearyland was an extension of Greenland.

In 1912, Knud Rasmussen and Peter Freuchen reached the outlet of the supposed channel and found it to be an inlet, which they named Independence Bay.

This proof that Pearyland was a part of Greenland, and thus a possession of Denmark furthered Danish interest in the area.

Pearyland is almost entirely unknown and the new Munch-Knuth expedition is listed as being scientific and exploratory in nature. The area is known to be free of the icecap that covers the rest of Greenland, and is comparatively fertile. Earlier explorers report the existence of numerous musk oxen and rabbits.

Though now uninhabited, remains of old Eskimo summer dwellings indicate former life in the area. The absence of winter quarters suggests that the former habitants used igloos in the winter, and this will be one of the secrets which the new expedition will seek to solve. Remains of Eskimoes who might have lived in the area will also be sought.

Though it is impossible to sail up to Pearyland, it is almost always open along the east coast of Greenland as far north as the 72d to the 77th parallel. Caches of supplies will be placed in that area, but the main group of men will be brought in by air in six consolidated Cataline amphibians.

These planes, purchased at a low price from the United States Government, will speed up the expedition's work. They also indicate, to the Danes, an American interest in the project.

One of the base sites of the expedition will be the meteorological station at Morkefjord, site of the abortive German weather station destroyed by American naval forces during the war.

Though still financially straitened, the Danish government feels itself under an obligation to keep alive its scientific research in the North. The cost of the Munch-Knuth expedition will be 1,000,000 Danish kroner $210,000), one-half of which will be furnished by the government with the balance coming from private sources.

16 SAIL FOR THE ARCTIC

BOOTHBAY HARBOR, Me., June 21 (AP)—The tough-timbered schooner Bowdoin sailed today for the Arctic, bearing Donald B. MacMillan, the veteran explorer, and fifteen shipmates who will study Greenland glaciers on an 8,000-mile, summer-long cruise.

The first planned port of call was Sydney, N. S. The little two-master will visit Nain in Labrador before it crosses Baffin Bay to Greenland's western shore and heads north to Etak, eleven degrees from the Pole.

The major aim of the expedition, sponsored by the Chicago Geographical Society is measurement of the speed of Umiamako, Upernvic, Jacobshaven and Rink Glaciers.

RUSSIANS REQUEST SPITSBERGEN BASES

Facilities on Norwegian Island Sought for Military Uses—Soviet Owns Mines There

LONDON, Jan. 9—The Soviet Union has requested facilities from the Norwegian Government for military bases on Spitsbergen Island off the northern tip of Norway, it was learned authoritatively tonight.

The Russians approached the Norwegian Government some months ago, but details as to the Soviet requests still were lacking.

Norwegian sovereignty over the archipelago of Spitsbergen was settled by a treaty signed in Paris in 1920, and in August, 1925, Norway took possession.

The ownership of the islands, whose total area is a little more than 24,000 square miles, was a matter of long dispute among Norway, Sweden and Russia, and long and fruitless negotiations took place in the fifty years preceding the first World War. It was not until 1925 that the Soviet Government signified its adherence to the 1920 treaty.

Certain coal mines in the Green Harbor area southwest of Longyear are owned by Russia, whose coal production from Spitsbergen in 1937 was twice that of Norway. During the war an Allied air attack on Spitsbergen denied to the Germans coal they otherwise would have had.

Deny Red Spitsbergen Plea

OSLO, March 3 (AP).—The Norwegian Parliament in a secret session on Feb. 15 turned down a Russian request for military bases on the Arctic Archipelago of Spitsbergen, an official statement said tonight. The vote was 101 to 11. The opposition was all Communists.

ARCTIC STATION REOPENS

Russians Man Rudolf Island, Northernmost Scientific Base

MOSCOW, May 15—The world's northernmost scientific outpost, the Rudolf Island arctic station in Franz Josef Land Archipelago, has resumed operations, the Moscow News announced today.

The station, which has been closed since the spring of 1942 because of the war, is at 81 degrees 44 minutes north Latitude.

A party of three, including a meteorologist, a radio operator and a mechanic, traveled some 162 miles by dogsled to the open station, which was found in perfect condition.

Russians Said to Get Coal From New Arctic Mines

North American Newspaper Alliance.

The Russians are getting coal from huge deposits in the Soviet-owned Arctic land of Novaya Zemlya, east of Spitsbergen. This replaces the coal they got from their concession on now-disputed Spitsbergen archipelago, whose mines were "scorched" by British-Norwegian-Canadian commandos in 1941 and have not yet been restored.

Newly developed mines at Vorkuta, on the southern tip of Novaya Zemlya, now supply coal both to the Arctic mainland of European Russia and to shipping in the White Sea. The Swiss newspaper Tribune de Geneve, reporting this, adds that the mines are exploited mainly with the labor of Lithuanian prisoners, some 75,000 of whom are said to be concentrated in and around Vorkuta.

HUGE GLACIER FLOODS ARCTIC SIBERIAN AREA

MOSCOW, June 14 (AP)—Youthful Russian geographers, puzzled by reports of Arctic rivers that flooded villages by day and receded by night, traveled to the coldest inhabited place in the world and discovered a huge glacier and mountain range, Soviet scientists said today. They described the glacier as "one of the largest in the world."

The discoveries, in the northern Yakutsk region of Siberia, were being hailed by the All-Union Geographic Congress at Leningrad as of great scientific significance, the newspaper Komsomol Pravda said.

Lev Berman, one of the scientists in the expedition, said the party started from the village of Oimyakon, where the rivers Kuidusun and Kruenta flow into the Indigirka, well above the Arctic Circle. In the summer, the villagers near by experienced strange floods which quickly subsided by night.

Mr. Berman said the group penetrated where no human being ever trod before and found a huge blue glacier was the cause of the trouble. He said the temperatures in the region were 70 to 80 degrees below zero Fahrenheit in winter but in summer the days were sometimes hot.

Reaching the center of the glacier in midsummer, Mr. Berman said, the scientists found the ice suddenly melting and noted that the rivers began to swirl. As nightfall approached, the temperature dropped suddenly and the rivers froze again.

While they were on the glacier, Mr. Berman said, the expedition discovered a large mountain range that they called Suntar-Hayata. They reported it to be about ninety miles long and said it contained one of the highest peaks in the northeastern region of the Soviet Union.

Soviets to Search Arctic for Study Of Micro-Organism

MOSCOW, June 12 (AP) Soviet research scientists next month will resume first hand investigation of some of the oldest things in the world—frozen millennium micro-organisms from deep in the ground above the Arctic Circle.

Disclosing this, the Moscow News said "a fascinating prospect of delving back tens and perhaps hundreds of thousands of years into the history of existence on earth and reviving flora and fauna today extinct is unfolded by anabiosis research at Vorkuta frigid zone experiment station."

That certain of the simplest species of fungi and algae with insignificant water content from 1 to 3 per cent may retain vitality over a period of many thousands of years upon freezing had been definitely established by Soviet biologist and geographer P. N. Kapterev before the war when he revived 49 species of algae, one species of fly and even one of the simplest varieties of crustacea.

From the depth at which they were found in frigid soil it is estimated that some had been in a frozen state from 30,000 to 40,000 years.

Next to be cleared up is the time span after which micro-organisms in the frozen state no longer can be revived and what other species can retain vitality in such a state. Since the time span runs into millenniums, the answer to this question can be sought only in the colossal laboratory nature provided in frigid soils, although man has been able to reproduce the phenomenon fully in recent experiments which showed certain spores do not lose vitality even when submerged in liquid helium at temperatures as low as 271 degrees below zero centigrade.

Claims Arctic Has Two Magnetic Poles

MOSCOW, June 6 [Reuters]—A second north magnetic pole has been found in the Arctic between Wrangles land and Franz Joseph land, Tass, the official Soviet news agency, reported today.

The existence of the new pole—at latitude 86 degrees north and longitude 178 degrees west—was first suggested by the Russian arctic explorer, Prof. Weinberg, the report said.

Russians Are Charting Icebound Arctic Areas

MOSCOW, April 10 (Reuters)—Members of the Soviet Arctic Institute are charting the icebound Kara and Laptev Seas from the air in preparation for the opening of navigation in the western sector of the Arctic.

Note of 1901-02 Arctic Expedition Found; Plea Sent in Buoy by U. S.-Baldwin Party

LONDON, Jan. 17 (AP)—Russian fishermen recently picked up a buoy containing a dramatic note from members of a long-forgotten American North Polar expedition, the Moscow radio said tonight.

The broadcaster, quoting a Tass dispatch from Murmansk, said the note was from the expedition led by the late Evelyn B. Baldwin, United States Weather Bureau and Army Signal Corps Meteorologist, and financed by William Ziegler, Brooklyn, N. Y., manufacturer, which entered the Arctic wastes in 1901 and returned the following year.

The note, written both in English and Norwegian, said:

"Camp Ziegler, Franz Joseph Land, Field Headquarters of Baldwin-Ziegler Polar Expedition, June 24, 1902.

"To nearest American Consulate:

"Cargo coal required quickly. Yacht America in open water (Aberdare Channel) since June 8. This year's work successful—enormous depot placed on Rudolf Land by sledge in March, April and May. Collection for National Museum, record from and paintings of Nansen's Hut, excellent photographs and moving pictures, etc., secured. Five ponies and 150 dogs remaining.

"Desire hay, fish and 30 sledges. Must return early in August, baffled but not beaten. Please rush coal. Northeasterly winds prevailing. All in health. 13th balloon. Buoy No. 174.

"Baldwin, Signal Corps, USA."

Tass said the fishermen found the buoy near Vilkitsky Land. The dispatch said the expedition consisted of forty-five Americans and Norwegians and six native dog-team drivers who set out from Tromsoe, Norway, July 27, 1901.

Hoped to Reach North Pole

American records say the expedition failed to achieve Mr. Ziegler's aim of planting "the American flag at the North Pole" because of lack of supplies and destruction of the sledges. It returned to Norway on Aug. 1, 1902.

Mr. Ziegler, a baking powder manufacturer who twice declined the Republican nomination for Mayor of Brooklyn, died at Noroton, Conn., in 1905. Mr. Baldwin, who on an earlier expedition had discovered several of the eastern islands of the Franz Joseph Archipelago, about 750 miles from the North Pole, died in 1933.

The 1901-2 party sent up balloons to which were attached message buoys. It was hoped that the messages would drift to open water to the south and there be picked up. Some of them were recovered in later years, one being picked up on the coast of Iceland in 1931.

The expedition was credited with having introduced several innovations in polar exploration, notably the use of motion-picture photography.

The "Nansen's hut" referred to in the message was that of Fridtjof Nansen, Norwegian Arctic explorer, who spent the winter of 1895-96 in Franz Joseph Land.

BYRD AIDE DIES AFTER SAVING WIFE

Walden, Noted Dog Sled Driver, Believed Victim of Heart Ailment Rather Than Fire

WONALANCET, N. H., March 26 (AP)—Arthur T. Walden, 76, chief dog driver of Admiral Richard E. Byrd's first Antarctic expedition, died today in saving his wife from a fire which destroyed their farm home.

Mrs. Walden, 86, suffered severe burns when her clothing caught fire, apparently from a spark from the living room fireplace.

Fire Chief Almon Evans said that Mr. Walden, after leading his wife to safety, apparently collapsed as he returned to the kitchen to draw a pail of water to throw on the blaze. Although badly burned, his death was due to a heart ailment, Dr. Robert Quimby said.

Veteran of Alaskan Trails

When Admiral Byrd began in 1928 to draw up a list of men to accompany him on his first expedition to the Antarctic, one of his first selections was Arthur Treadwell Walden, veteran dog sled man of the Alaskan trails.

Mr. Walden was born in Indianapolis on May 10, 1871, but spent little time in the flat farm land of that part of the country. Seeking adventure as a young man, he went north to Canada and Alaska. He began to handle and train sled dogs in 1896.

Before, during, and after the Klondike gold rush Mr. Walden was driving the trails and the route from Circle City to Dawson when the country was wild. In his memoirs, published in 1928, he belittled many of the romantic legends that have grown up about the place and the period. Nevertheless he always looked back on those rugged days as the most exciting period of his life.

Even after he had been in the Antarctic with the Byrd expedition of 1928-30 his memory turned to Alaska. Speaking of the Antarctic on his return to New York in 1930, he said:

"There was nothing but ice and snow. No mountains like Alaska—never again for me."

He made good his word. He stayed in the United States during the second Byrd expedition to Little America, and raised dogs on his farm at Wonalancet.

Although Mr. Walden had a wide reputation in sporting circles for his training and racing of sled dogs before the Byrd expedition, it was the trip to the South Pole and the stories that followed about his most famous dog, Chinook, a giant 12-year-old husky, that made him a public figure.

Chinook, one of the great sled dogs of all time and the progenitor of a long line of other fine dogs, headed a list of some seventy-five huskies that went along on the expedition. He was old, but still indisputably the leader of the team. But one day early in 1929, he was beaten in a fight with another dog, a thing that never happened to him before. He disappeared and never returned to camp.

DIES AFTER FIRE

Arthur T. Walden

Percy A. Taverner, Noted Ornithologist

Built 25,000-Bird Collection for Canada Museum

OTTAWA, May 10 (UP).—Percy A. Taverner, seventy-one, retired Chief of the Ornithological Division of the National Museum of Canada, died here yesterday at his home.

Devised Bird-Banding System

Mr. Taverner practiced architecture in Chicago and Detroit from 1900 to 1910. He became interested in ornithology through the exhibits in the University of Michigan Museum at Ann Arbor.

In 1905 he devised the first systematic method of bird-banding to further research, and made and distributed bands to other ornithologists throughout North America. He traveled all over North America seeking specimens, and built the Canadian Museum collection to 25,000.

He accompanied the Eastern Canadian Arctic Expedition in 1929 and was one of the ten British Empire members of the British Ornithological Union. He was a fellow of the American Ornithological Union and the Royal Society of Canada.

He was an expert amateur book binder and was author of "Birds of Canada," and other books, as well as of many scientific papers. Mr. Taverner married the former Martha Hohly-Wiest in 1930.

Dr. Wilfred H. Osgood, Famed Zoologist, Dies

CHICAGO, June 21—Dr. Wilfred Hudson Osgood, curator emeritus of zoology at the Natural History Museum in Chicago, died on Friday in Billings Memorial Hospital. He was 71 years old.

Dr. Osgood joined the museum staff in 1909 as assistant curator and twelve years later became head of the zoology department. He was recognized as one of the country's leading zoologists, specializing in the field of mammals, and also was a lexicographer and contributor to encyclopedias.

Dr. Osgood was a biologist with the United States Department of Agriculture from 1897 to 1909 and had charge of the United States biological investigation in Alaska from 1899 to 1909. He was United States investigator of the fur seal question in 1914.

Dr. Osgood was the author of "Revision of Pocket Mice," 1900; "Revision of Mice of Genus Peromyscus," and "Biological Investigations of Alaska and Yukon," 1909

He was joint author of "Fur Seals of Pribilof Island," 1915, and "Artist and Naturalist in Ethiopia." 1936.

DR. SEYMOUR A. HADWEN

Animal Pathologist in Canada Led U. S. Reindeer Inquiry

TORONTO, April 20 (Canadian Press) — Dr. I. Seymour Andrew Hadwen, formerly director of the Department of Pathology and Bacteriology at the Ontario Research Foundation, died Friday. He was noted for his work on parasites and diseases of animals, particularly reindeer.

Born at Lees, Lancashire, a son of a Liverpool cotton manufacturer, Dr. Hadwen came to Canada at the age of 14.

He was chief animal pathologist for Canada from 1917 to 1920, when he resigned to conduct the Alaska reindeer investigation for the United States Government.

Dr. Hadwen was in charge of veterinary research at the University of Saskatchewan from 1923 to 1928, quitting this post to join the Ontario Research Foundation, from which he retired ten years ago. He was a past president of the American Veterinary Medical Association.

Rev. Dr. C. E. Whittaker

TORONTO, Feb. 3 — (C.P.) — Rev. Dr. Charles Edward Whittaker, 92, missionary among the Eskimos and Indians of the Arctic for 22 years, died at his home here Saturday. His wife died six months ago.

Native of Burford, Ont., he was sent after ordination in the Anglican Church, to the Mackenzie River district as a missionary in the Diocese of the Arctic. From Edmonton he later travelled to the missionary field by dog sled in the winter and scow in the summer.

He was later posted to the Yukon, serving in Whitehorse. Dr. Whittaker translated portions of the New Testament into Eskimo and was the author of a book called "Arctic Eskimos."

Retractable Skis Latest Flying Aid

DAYTON, O., June 16—(A.P.)—Development of novel detractable skis, permitting planes to land and take-off from snow-covered runways, was announced yesterday by the United States Army Air Force at Wright Field.

The skis are added over regulation wheels, allowing the use of either as the occasion arises. The centre section of the aluminum alloys skis is cut away, allowing the wheel to come through.

Officials said the ski gear will permit use of landing fields through a greater part of the year than ever before.

DESIGNS ARCTIC SHELTER

Army Has a Unit Which Can Be Quickly Moved and Put Up

WASHINGTON, June 28 (AP)—Army engineers are designing a prefabricated temporary Arctic shelter for troops which can be transported by plane or glider and erected quickly by unskilled men.

The War Department said the shelter would be capable of providing an interior temperature of 70 degrees Fahrenheit while the thermometer outside drops to 70 below. It also will stand up against a 125-mile-an-hour wind.

The engineers are using aluminum in their preliminary plans, but the design is such that other materials could be used if necessary. The units will be eight by twenty-nine feet and capable of expansion horizontally in either direction without connecting devices.

The units will be used for barracks, administration buildings, warehousing, shops, post exchanges, hospitals and mess halls. Construction will be such as to permit removal and quick reassemblage.

Persistent Penguins

LONDON, June 3 (UP).—Crewmen of the whaler Balaena, just returned from the Antarctic, vouched today for this story of the "persistent penguins."

Seven penguins reportedly turned up on the back of a whale being hauled up the stern ramp.

Kind-hearted sailors, feeling that the penquins were out of their element, dropped them back overboard.

When the next whale was hoisted to the deck, there were the seven penguins again. This time the crew let them stay, and brought them back to a zoo.

Bars Extra Night Pay in Arctic

WASHINGTON, June 30 (AP)—No Eskimo slicker is going to put anything over on the United States Senate. Advised that the Weather Bureau hires observers in the Arctic, where the nights are nearly six months long, the Senate amended the State-Justice-Commerce Department appropriation bill today to provide that the bureau does not have to pay night differentials up there.

Warming Arctic Climate Melting Glaciers Faster, Raising Ocean Level, Scientist Says

LOS ANGELES, May 29—A mysterious warming of the climate is slowly manifesting itself in the Arctic, engendering a "serious international problem," Dr. Hans Ahlmann, noted Swedish geophysicist, said today.

Dr. Ahlmann, Professor of Geography at the University of Stockholm and director of the Swedish Geographical Institute, discussed the phenomenon, on the basis of personal research over two decades, at a seminar of the Geophysical Institute at the University of California here.

Since 1900, Dr. Ahlmann said, Arctic air temperatures have increased 10 degrees fahrenheit, an "enormous" rise from a scientific standpoint.

In the same period, ocean waters in the militarily strategic Spitsbergen area have risen 3 to 5 degrees in temperature, and, apparently because of the accelerated melting of glaciers, one to one and one-half millimeters yearly in level, he said.

"We do not even know the reason behind this climatic change in recent years," Dr. Ahlmann added.

If, however, the cause were of global nature, and "if the Antarctic ice regions and the major Greenland ice cap should be reduced at the same rate as the present melting, oceanic surfaces would rise to catastrophic proportions," he said. "Peoples living in lowlands along the shores would be inundated."

The climatic change was not implausible, Dr. Ahlmann suggested, in view of the fact that "we know that the tropics have felt a marked climatic change in the last fifteen or twenty years, especially in the vicinity of West Africa. Many smaller lakes have actually disappeared and larger ones are drying up. Even huge Lake Victoria has dropped seven inches in the past decade."

The Arctic change, the scientist asserted, "is so serious that I hope an international agency can be formed to study conditions on a global basis. That is most urgent."

One effect of the change, he said, has been to improve navigation conditions along the northern rim of Europe, a development of chief interest to Russia.

"In 1910 the navigable season along western Spitsbergen lasted only three months," he said. "Now it lasts eight months. This is of world strategic importance."

New Spitsbergen Peak Held Arctic's Highest

NEW YORK, Jan. 27.—A French expedition claims to have discovered the Arctic's highest peak—a hitherto unknown and uncharted mountain 13 miles northwest of Mount Newton, until now believed to be the highest. The new champion is located in the disputed Spitsbergen Archipelago, which the French group mapped last summer.

The Geneva Tribune reports that the peak was seen from the upper slopes of Mount Newton. It has been named Mount Perrier, honoring the recently deceased president of the French Geographical Society. The expedition was led by J. A. Martin of the Paris Engineering School.

To Head Polar Research

LOS ANGELES, June 24.—Dr. Harald U. Sverdrup, 58, for 11 years director of the University of California's Scripps Iistitution of Oceanography at LaJolla, Calif., will resign next year to become director of the National Institute of Polar Research in Oslo, Norway university president Robert G Sproul announced today.

Sets Up Arctic Rescue Teams

WASHINGTON, June 2 (AP)—The Army Air Forces said today that it was organizing parachute rescue teams in Alaska to aid fliers forced down in the Arctic. Each team will consist of two medical technicians, two Alaskan-trained guides and a surgeon. The teams will be carried by scouting planes when they are looking for aircraft in trouble.

Ice-Breaker Will Supply Aid to Weather Stations

PROVIDENCE, R. I., June 30—The U. S. S. Edisto, 6,000-ton ice breaker now at near-by Quonset Point naval air station for crew training purposes, will be the flagship of a three-vessel task force which will leave in July to force its way through the ice-filled seas around Greenland to supply United States weather stations in the Arctic.

Secondary purposes of the trip will be to test theories and techniques developed during Operation Highjump, the South Polar operation, and to compile additional data about the regions of permanent ice packs. Other ships in the force will be the transports Whitewood and Wyandot. They will leave from Boston.

The Edisto's equipment will include a Bell helicopter, which will be used to spot leads through the ice packs; a Gruman single-engined amphibian which has been modified for the trip.

NORWAY PLANS EXPEDITION

OSLO, Norway, Jan. 21—Norway is planning to send a scientific expedition to the Svalbard Islands [Spitsbergen] this year to adjust maps, make meteorological observations and study Arctic Sea areas.

A new society called "Norway's Svalbard and Arctic Sea Investigations" has just been formed. It was announced today that the society had received $100,000 from the Norwegian Storting [Parliament] to aid its work. The expedition will set out at the end of June.

STAMP NEWS

Two special stamps were issued by the Argentine Republic on May 25 to commemorate "the first Argentine Antarctic post," according to word from Buenos Aires. The issue consists of 20,000,000 copies each of a 5-centavo, violet, and a 20-centavo rose-carmine denomination. In addition, 5,000 special commemorative cards, imprinted either with the 20-centavo stamp and sold for 30 centavos, or a 5-centavo card which was sold for 15 centavos, also were issued and completely sold out on the day of release. A map of the polar regions decorate the stamps.

The date which appears on the stamps, "Feb. 22, 1904," is explained on the cards, printed in Spanish. On that day, it is related, 'the Argentine flag floated in the breeze of the most southerly regions of the globe, being an indication of the heroic push of the Argentine Republic and of its sovereignty in the zone which extends from longitude 25 to 74 west meridian, and as far north as the Orkneys and as far south as the Pole." The map on the stamps shows that tract of land, radiating from the South Pole in a broad triangular swath.

(It was on Feb. 22, 1904, that Capitan Julian Irizar returned from a cruise to the Polar regions aboard the Corbetta Uruguay, during which he rescued the crew of a Norwegian expedition which had been lost in Antarctica.)

Chile—The promised stamps calling attention to Chile's claim to terrain in the Antarctic have reached the Tribune Stamp Company. On large-size 40-centavos red and 2.50-pesos blue is outlined a triangular area from a point off the tip of South America to the "Polo Sur" (South Pole). "Antartica Chilena" and "Decreto No. 1747 de 6-XI-1940" also are inscribed. It was under a Government decree on Nov. 6, 1940, that Chile declared its right to possession of the area shown.

ANTARCTIC SAGA—Belgium has just commemorated the 50th anniversary of Capt. Adrien de Gerlache's Antarctic expedition aboard the Belgica, by issuing a 1.35fr rose stamp portraying the explorer, and a 2.25fr gray black stamp showing his ice-stranded ship and five members of his expedition.

Roald Amundsen and Dr. F. A. Cook were on that expedition. After surveying the archipelago west of Graham Land, the Gerlache expedition was marooned for more than a year when the Belgica became frozn in the ice pack. It was terribly depressing for the men, but only one died.

Norway—From Oslo comes word that the tercentenary jubilee of Norway's postal system will be commemorated on April 15 with eleven stamps bearing designs associated with "commercial and political history" from 1647 to date.

On 55-öre yellow-brown is Roald Amundsen (1872-1928), explorer. (On the same stamp appears a philatelic familiar, Fridtiof Nansen, explorer.) On 50ö brown is Svend Foyn (1809-1894), whaler, and inventor of the harpoon gun used in whaling.

Japan—From Ichiro Yoshida in Tokyo comes a 5-yen blue picturing whalers firing harpoon gun at a school of whales in the background.

90-Ton Whale Killed

London, June 6—(AP)—The Moscow radio last night broadcast a Tass report from Vladivostok of a "rare catch" by Soviet whale fishers near the Aleutians, the killing of a 90-ton whale.

The sturdy Burton Island is shown moored in the ice of the Bay of Whales shortly after it arrived there to lead the evacuation of the Central Group from Antarctica. Note the sheath of ice on the bow of the icebreaker and the figures of the men standing on the ice near the rope ladder.

Comfortable in his fur cap, Admiral Byrd puffs mightily to light a corncob pipe and tobacco left behind at Camp Little America II years before. The match is a candle.

Pictured above is one of the most imagination-stirring discoveries made by Adm. Richard E. Byrd's recent Antarctic expedition—a large ice-free area dotted with multi-colored lakes, in a region hitherto considered to be perpetually blanketed by ice and snow. Photo shows second of two such "oases" found, located in the Vestfold mountains on the Ingrid Christensen coast of Antarctica.